AcerPower F1/Aspire T310

Service Guide

Service guide files and updates are available on the AIPG/CSD web; for more information, please refer to http://csd.acer.com.tw

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Revision History

Please refer to the table below for the updates made on AcerPower F1/Aspire T310 service guide.

Date	Chapter	Updates
2003/10/29	Chapter 1	> Amend the FSB speed up to 800MHz on page 2 > Memory portion > Memory combination portion
2003/12/18	Chapter 1	>Amend the Rear Panel and mainboard layout without SATA

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Conventions

The following conventions are used in this manual:

`Screen messages`	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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Table of Contents

Table of Contents

System Specifications

Overview

The Aspire T310/AcerPower F1 supports Intel Pentium 4 Northwood based micro-ATX, IBM PC/AT compatible system with PCI/AGP bus.

Features & Specifications

CPU

- Support Intel P4 Northwood (Socket 478) processor.
- Support 800MHz, 533MHz or 400MHz FSB.
- Support up to 3.06GHz+ P4 processor.
- Support Intel Hyper Threading Technology.

Chipset

- SiS 661FX, SiS964L

Memory

- Socket Type: DDR-SDRAM PC2700/PC2100/PC3200(DDR400) 184-pin socket.
- Support 64Mb, 128Mb, 256Mb, 512 Mb and 1Gb technologies.
- Total: 64MB ~ 2GB (please refer to the AVL list for compatibility).

Graphics

- On-die VGA
- 1 VGA port

AGP/PCI

- One AGP 8X/4X 1.5V slot
- Three PCI 2.2 5V slots

FDD

- One FDD slot supports 1.44MB/3 mode 3.5” devices

IDE

- Slot Type: 40 pin IDE slot
- Slot Quantity: 2
- Transfer rate support:
  - PIO Mode: 0/1/2/3/4
  - Ultra DMA 66/100/133
- Storage Type support:
  - HDD/CD-ROM/CD-RW/DVD
  - Zip 250
- ATA-100 transfer rate

Audio

- Embedded RealTek ALC655 audio codec with 16-bit Sound Blaster compatibility
- Chip (Additional): AC97 Codec, 20 bit with amplifier
- Interface: AC Link
- Channel: 6
- Connectors support:
  - Line-in/Line-out (rear)

- Microphone-in (rear)/Microphone-in (front) (Default)
- Headphone Out (front) (Default)

LAN

- Supports 10/100MB ethernet environment

USB

- Connectors Quantity:
  - On-board: 4 (rear)
  - Connector Pin: 4
- Transfer Rate:
  - USB 2.0/1.1

BIOS

- 4MB Award BIOS with Plug and Play BIOS
- ACPI, SMBIOS 2.3, Green and Boot Block.
- Provides DMI 2.0, WFM 2.0, WOL, WOR, chassis intrusion and SM Bus for system management.

Others

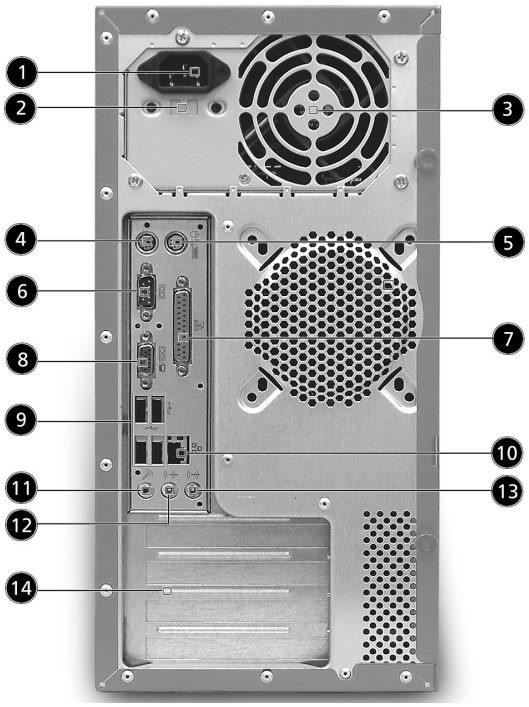
- Suspend to RAM/Disk
- PC2001 Compliant
- Support PS2 Keyboard/Mouse and USB Keyboard/Mouse wake up function

Acer Power F1 Front Panel

The computer's front panel consists of the following:

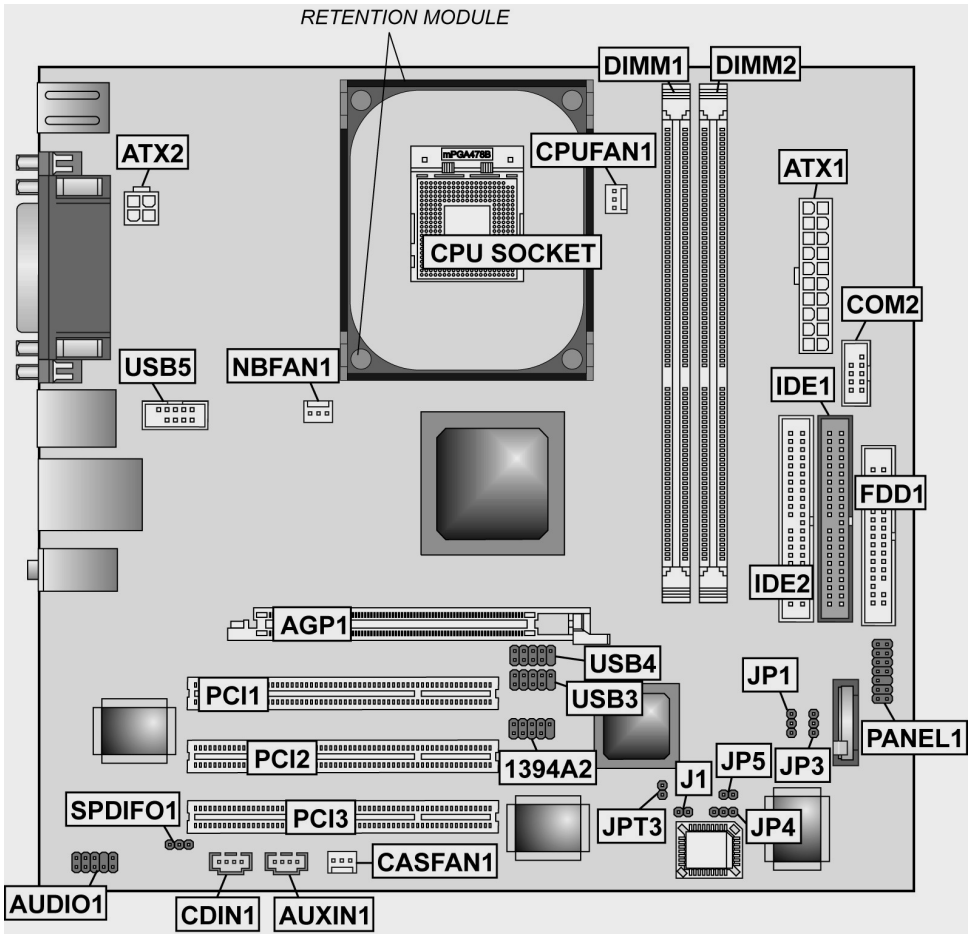
Label	Description
1	Optical Drive
2	FDD Drive
3	Power Button
4	Universal Serial Bus (USB) Ports
5	Microphone Jack
6	Speaker/Headphone jack

Acer Power F1 Rear Panel



Label	Description
1	Power Code Socket
2	Voltage Selector Switch
3	Fan Aperture
4	PS/2 Keyboard Port
5	PS/2 Mouse Connector
6	Serial Connector
7	Printer Connector
8	Monitor Connector
9	USB Connector
10	RJ-45 Ethernet Connector
11	Microphone Jack
12	Line-Out Jack
13	Line-In Jack
14	Extension Card Slots

Aspire T310/Acer Power F1



Label	Description
1394A2	IEEE 1394 Header
AGP1	Accelerated Graphics Port
ATX1	Standard 20-pin ATX power connector
ATX2	ATX12V power connector
AUDIO1	Front audio connector
AUXIN1	Auxiliary Audio input header
CASFAN1	Case fan connector
CDIN1	Primary CD-in Connector
COM2	Onboard serial port header COM2
CPU SOCKET	Micro PGA 478-pin socket for Pentium 4 CPUs
CPUFAN1	Cooling fan for CPU
DIMM1-DIMM2	Two 184-pin DDR SDRAM

Label	Description
FDD1	Floppy disk drive connector
IDE1	Primary IDE channel
IDE2	Secondary IDE channel
JP1	Clear CMOS jumper
JP3	BIOS flash protect jumper
NBFAN1	Cooling fan for NB
PANEL1	Connector for case front panel switches and LED indicators
PCI1~PCI3	Three 32-bit add-on card slots
SATA1~SATA2	Two serial ATA headers
SJ1	Single color LED header
SPDIFO1	SPDIF out header
USB3 ~ USB4	Two connectors for front panel USB ports

Hardware Specifications and Configurations

Processor

Item	Specification
Type	Pentium 4
Socket	478
Speed	1.8G~3.06G and 3.2G
Minimum operating speed	0 MHz (If **Stop CPU Clock in Sleep State in BIOS Setup** is set to **Enabled**.)

BIOS

Item	Specification
BIOS code programmer	Award
BIOS version	v6.0
BIOS ROM type	Flash ROM
BIOS ROM size	4MB
BIOS ROM package	32-pin DIP package
Support protocol	PCI 2.2, APM1.2, DMI 2.00.1, E-IDE, ACPI 1.0, ESCD 1.03, ANSI ATA 3.0, PnP 1a, Bootable CD-ROM 1.0, ATAPI
Boot from CD-ROM feature	Yes
Support to LS-120 drive	No
Support to BIOS boot block feature	No

NOTE: The BIOS can be overwritten/upgraded by using the flash utility.

BIOS Hotkey List

Hotkey	Function	Description
DEL	Enter BIOS Setup Utility	Press while the system is booting to enter BIOS Setup Utility.

This section has two table lists, system memory specification and the possible combinations of memory module.

System Memory

Item	Specification
Memory socket number	2 sockets (4 banks)
Support memory size per socket	64MB / 128MB / 256MB/ 512MB/1G
Support maximum memory size	1G x2
Support memory type	DDR SDRAM
Support memory speed	DDR400/333/266
Support memory voltage	2.5 V
Support memory module package	184-pin DIMM
Support to parity check feature	Yes
Support to Error Correction Code (ECC) feature	No
Memory module combinations	You can install memory modules in any combination as long as they match the above specifications.

Memory Combinations

Slot	Memory Module	Total Memory
Slot 1	64, 128, 256, 512MB, 1G	64MB~1G
Slot 2	64, 128, 256, 512MB, 1G	64MB~1G
Maximum System Memory Supported		2G

Cache Memory

Item	Specification
First-Level Cache Configurations	
Cache function control	Enable/Disable by BIOS Setup
Second-Level Cache Configurations	
L2 Cache RAM type	PBSRAM
L2 Cache RAM size	Celeron: 128K Intel P4: 256K/512K PreScoot: 1024K
L2 Cache RAM speed	One-half the processor core clock frequency
L2 Cache RAM voltage	
L2 Cache function control	Enable/Disable by BIOS Setup
L2 Cache scheme	Fixed in write-back

Video Memory

Item	Specification
Memory size	32 MB or above

This section has two table lists, the video interface specification and its supported display modes.

Video Interface

Item	Specification
Video controller	661FX
Video controller resident bus	AGP bus
Video interface support	Video YUV texture in all texture formats H/W DVD accelerator

Display Screen Resolution	Refresh Rate (Hz)	Hor. Scan (KHz)	Pixel Clock (MHz)
640x480	60	31.5	25.2
640x480	72	37.4	32.0
640x480	75	37.5	31.5
640x480	85	43.3	36.0
640x480	120	63.7	55.0
800x600	56	35.2	36.0
800x600	60	37.8	39.9
800x600	72	48.0	50.0
800x600	75	46.9	49.5
800x600	85	53.7	56.2
800x600	100	62.5	67.5
800x600	120	76.1	81.0
800x600	160	101.9	110.0
1024x768	70	56.5	75.0
1024x768	75	60.0	78.8
1024x768	100	79.0	110.0
1280x1024	43	50.0	80.0
1280x1024	60	64.0	110.0
1280x1024	85	91.2	157.5
1600x1200	60	76.2	156.0
1600x1200	85	106.2	229.5

Audio Interface

Item	Specification
Audio controller	SiS 964L
Audio controller resident bus	AC’97
Audio function control	Enable/disable by BIOS Setup
Mono or stereo	Stereo
Resolution	20 bits

Audio Interface

Item	Specification
Compatibility	Sound Blaster Pro/16 compatible Mixed digital and analog high performance chip Enhanced stereo full duplex operation High performance audio accelerator and AC'97 support Full native DOS games compatibility Virtual FM enhances audio experience through real-time FM-to-Wavetable conversion MPU-401(UART mode) interface for wavetable synthesizers and MIDI devices Integrated dual game port Meets AC'97and WHQL specifications
Music synthesizer	Yes, internal FM synthesizer
Sampling rate	48 KHz (max.)
MPU-401 UART support	Yes
Microphone jack	Supported
Headphone jack	Supported

IDE Interface

Item	Specification
IDE controller	SiS 964L
IDE controller resident bus	PCI bus
Number of IDE channel	2
Support IDE interface	E-IDE (up to PIO mode-4 and Ultra DMA 33/66), ANSIS ATA rev.3.0 ATAPI
Support bootable CD-ROM	Yes

Floppy disk drive Interface

Item	Specification
Floppy disk drive controller	ITE 8705
Floppy disk drive controller resident bus	ISA bus
Support FDD format	360KB, 720KB, 1.2MB, 1.44MB, 2.88MB

Parallel Port

Item	Specification
Parallel port controller	ITE8705
Parallel port controller resident bus	ISA bus
Number of parallel ports	1
Support ECP/EPP	SPP / Bi-directional / ECP / EPP
Connector type	25-pin D-type female connector
Parallel port function control	Enable/disable by BIOS Setup
Optional ECP DMA channel (in BIOS Setup)	DMA channel 1 DMA channel 3
Optional parallel port I/O address (via BIOS Setup)	378h 278h
Optional parallel port IRQ (via BIOS Setup)	IRQ5 IRQ7

Serial Port

Item	Specification
Serial port controller	ITE8705
Serial port controller resident bus	ISA bus
Number of serial port	2
16550 UART support	Yes
Connector type	9-pin D-type female connector
Optional serial port I/O address (via BIOS Setup)	COM1: 2F8h, 3E8h, 2E8h COM2: 3E8h, 3F8h, 2F8h
Optional serial port IRQ (via BIOS Setup)	COM1: IRQ 3, and 4 COM2: IRQ 4, and 3

USB Port

Item	Specification
Universal HCI	USB 2.0
USB Class	Support legacy keyboard for legacy mode

Memory Address Map

Address	Size	Function
000000 - 07FFFF	512KBytes	Host Memory
080000 - 09FFFF	128KBytes	Host/PCI Memory
0A0000 - 0BFFFF	128KBytes	PCI/ISA Video Buffer Memory
0C0000 - 0C7FFF	32KBytes	Video BIOS Memory
0C8000 - 0DFFFF	96Kbytes	ISA Card BIOS & Buffer Memory
0E0000 - 0EFFFF	64Kbytes	BIOS Extension Memory Setup and Post Memory PCI Development BIOS

Memory Address Map

Address	Size	Function
0F0000 - 0FFFFF	64Kbytes	System BIOS Memory
100000 - UPPER LIMIT		Main Memory
UPPER LIMIT - 4GBytes		PCI Memory

PCI INTx# and IDSEL Assignment Map

PCI INTx #	PCI Devices	Device IDSEL: ADxx
INTA#	ADIMM-slot	N
INTB#	PCI-Slot1	AD20
INTC#	PCI-Slot2	AD21
INTD#	PCI-Slot3	AD22

PCI Slot IRQ Routing Map

PCI INTX#	INTA	INTB	INTC	INTD	Bus Mastering
PCI slot 1	Route 4	Route 1	Route 2	Route 3	Enabled
PCI slot 2	Route 3	Route 4	Route 1	Route 2	Enabled
PCI slot 3	Route 2	Route 3	Route 4	Route 1	Enabled

I/O Address Map

Hex Range	Devices
000-01F	DMA Controller-1
020-021	Interrupt Controller-1
040-043	System Timer
060-060	Keyboard Controller 8742
061-061	System Speaker
070-071	CMOS RAM Address and Real Time Clock
080-08F	DMA Page Register
0A0-0A1	Interrupt Controller-2
0C0-0DF	DMA Controller-2
0F0-0FF	Math Co-Processor
170-177	Secondary IDE
1F0-1F7	Primary IDE
278-27F	Parallel Printer Port 2
2F8-2FF	Serial Asynchronous Port 2
378-37F	Parallel Printer Port 1
3F0-3F5	Floppy Disk Controller
3F6-3F6	Secondary IDE
3F7-3F7	Primary IDE
3F8-3FF	Serial Asynchronous Port 1
0CF8	Configuration Address Register
0CFC	Configuration Data Register
778-77A	Parallel Printer Port 1

IRQ Assignment Map

IRQx	System Devices	Add-On-Card Devices
IRQ0	Timer	N
IRQ1	Keyboard	N
IRQ2	Cascade Interrupt Control	N
IRQ3	Serial Alternate	Reserved
IRQ4	Serial Primary	Reserved
IRQ5	MPU-401(Alternate)	Reserved
IRQ6	Floppy Disk	Reserved
IRQ7	Parallel Port	Reserved
IRQ8	Real Time Clock	N
IRQ9	N	Reserved
IRQ10	N	Reserved
IRQ11	N	Reserved
IRQ12	PS/2 Mouse	Reserved
IRQ13	Math Coprocessor Exception	N
IRQ14	Primary IDE	Reserved
IRQ15	Secondary IDE	Reserved

NOTE: N - Not be used

DRQ Assignment Map

DRQx	System Devices	Add-On-Card Devices
DRQ0	N	Reserved
DRQ1	N	Reserved
DRQ2	FDD	N
DRQ3	N	Reserved
DRQ4	Cascade	N
DRQ5	N	Reserved
DRQ6	N	Reserved
DRQ7	N	Reserved

NOTE: N - Not be used

Main Board Major Chips

Item	Controller
System core logic	SiS 661FX
Video controller	SiS 661FX
Super I/O controller	ITE8705
Audio controller	SiS 964L
LAN controller	RTL8100C
HDD controller	SiS 964L
Keyboard controller	SiS 964L

Environmental Requirements

Item	Specifications
Temperature	
Operating	+10 ~ +35°C
Non-operating	-20 ~ +60°C (Storage package)
Humidity	
Operating	20% to 80% RH
Non-operating	20% to 80% RH
Vibration	
Operating (unpacked)	5 ~ 16 Hz: 0.015 mm 16 ~ 250 Hz: 0.21 G
Non-operating (packed)	5 ~ 27.1 Hz: 0.6 G 27.1 ~ 50 Hz: 0.016 mm 50 ~ 500 Hz: 2 G

Mechanical Specifications

Item	Specification
Weight One 3 ½ FDD and one 3.5 HDD (without packing)	Varied by local configuration
Dimensions (main footprint)	190mm * 320mm * 360mm

Switching Power Supply 200W

Input Frequency	Frequency Variation Range
50MHz	47MHz to 53MHz
60MHz	57MHz to 63MHz

Input Voltage	Variation Range
100 - 120 VRMS	90 - 132 VRMS
200 - 240 VRMS	180 - 264 VRMS

Input Current	Measuring Range
4A	90 -132 VRMS
2A	180 - 264 VRMS

Output Requirements	Regulation	Current Rating
+5V	+-5%	15A
+12V	+-5%	3A
-12V	+-10%	0.3A
+3.3V	+-4%	12A
+5Vaux	+-5%	3A

Power Management Function (ACPI support function)

Device Standby Mode

- Independent power management timer for hard disk drive devices (0-15 minutes, time step=1 minute).
- Hard disk drive goes into Standby mode (for ATA standard interface).
- Disable V-sync to control the VESA DPMS monitor.
- Resume method: device activated (Keyboard for DOS, keyboard & mouse for Windows).
- Resume recovery time: 3-5 sec.

Global Standby Mode

- Global power management timer (2-120 minutes, time step=10 minute).
- Hard disk drive goes into Standby mode (for ATA standard interface).
- Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- Resume method: Return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- Resume recovery time: 7-10 sec.

Suspend Mode

- Independent power management timer (2-120 minutes, time step=10 minutes) or pushing external switch button.
- CPU goes into SMM.
- CPU asserts STPCLK# and goes into the Stop Grant State.
- LED on the panel turns amber colour.
- Hard disk drive goes into SLEEP mode (for ATA standard interface).
- Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- Ultra I/O and VGA chip go into power saving mode.
- Resume method: Return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- Return to original state by pushing external switch button, modem ring in and USB keyboard for ACPI mode.

ACPI

- ACPI specification 1.0b.
- S0, S1, S3 and S5 sleep state support.
- On board device power management support.
- On board device configuration support.

System Utilities

Most systems are already configured by the manufacturer or the dealer. There is no need to run Setup when starting the computer unless you get a Run Setup message.

The Setup program loads configuration values into the battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM.

NOTE: If you repeatedly receive Run Setup messages, the battery may be bad/flat. In this case, the system cannot retain configuration values in CMOS.

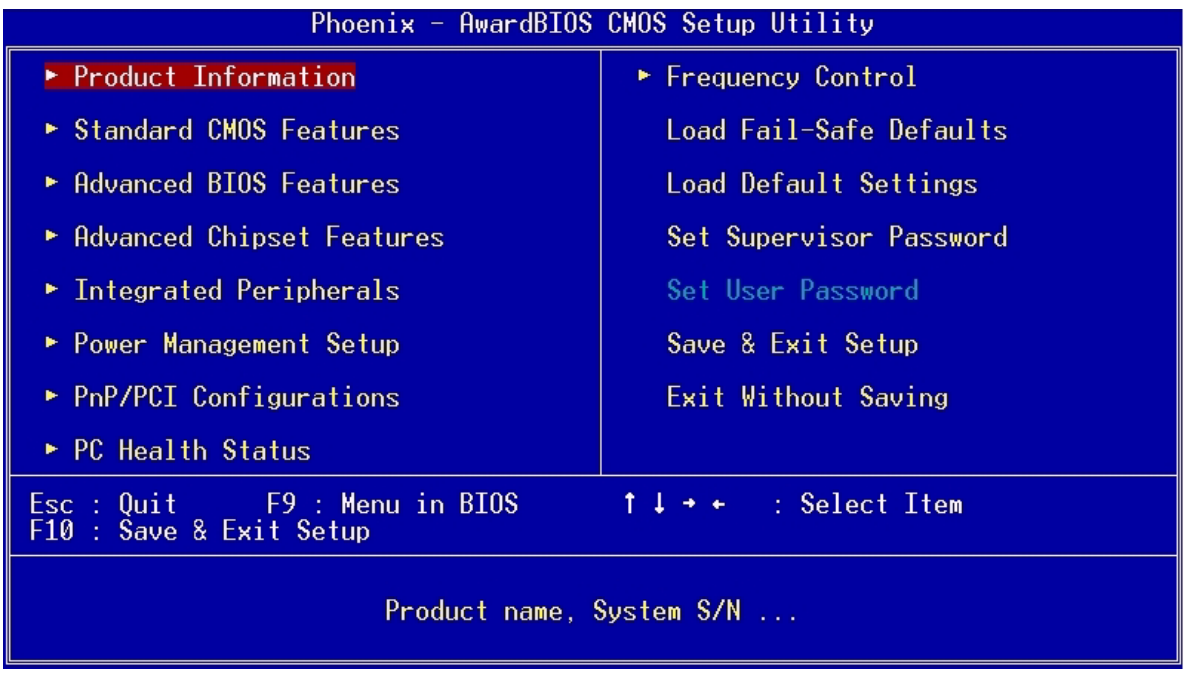
Before you run Setup, make sure that you have saved all open files. The system reboots immediately after you exit Setup.

Entering Setup

Power on the computer abd the system will start POST (Power On Self Test)prosecc. When the message of "`Press DEL to enter SETUP`" appears on the screen, press the key of [Delete] to enter the setup menu.

NOTE: If the message disappears before you respond and you still wish to enter Setup, restart the system by turning it OFF and On. You may also restart the system by simultaneously pressing [Ctrl+Alt+Delete].

The Setup Utility main menu then appears:



The command line at the bottom of the menu tells you how to move within a screen and from one screen to another.

- To select an option, move the highlight bar by pressing ↑ or ↓ then press ENTER.
- To change a parameter setting, press ← or → until the desired setting is found.
- Press ESC to return to the main menu. If you are already in the main menu, press ESC again to exit Setup.

The parameters on the screens show default values. These values may not be the same as those in your system.

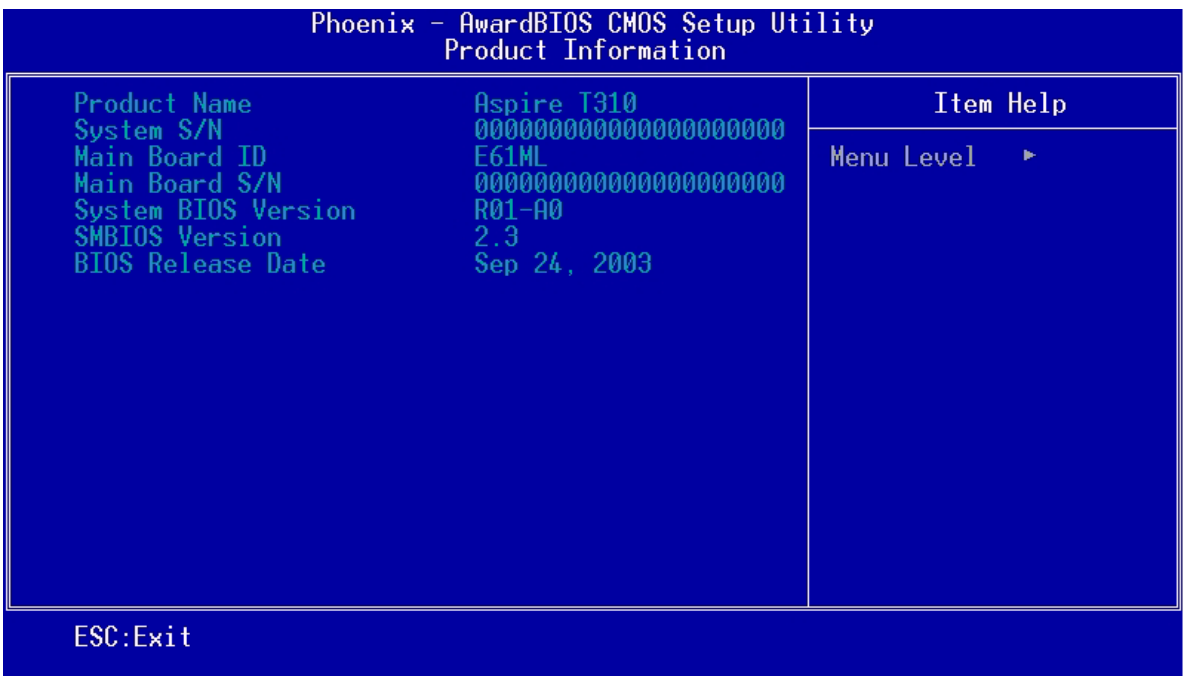
The grayed items on the screens have fixed settings and are not user-configurable.

NOTE: Due to the application of a new version of BIOS Setup program, you may find the BIOS menu is largely different from the former models. However, you will soon find out that this version is much more compact than the former ones.

Product Information

The screen below appears if you select Product Information from the main menu:

The Product Information menu contains general data about the system, such as the product name, serial number, BIOS version, etc. These information is necessary for troubleshooting (maybe required when asking for technical support).



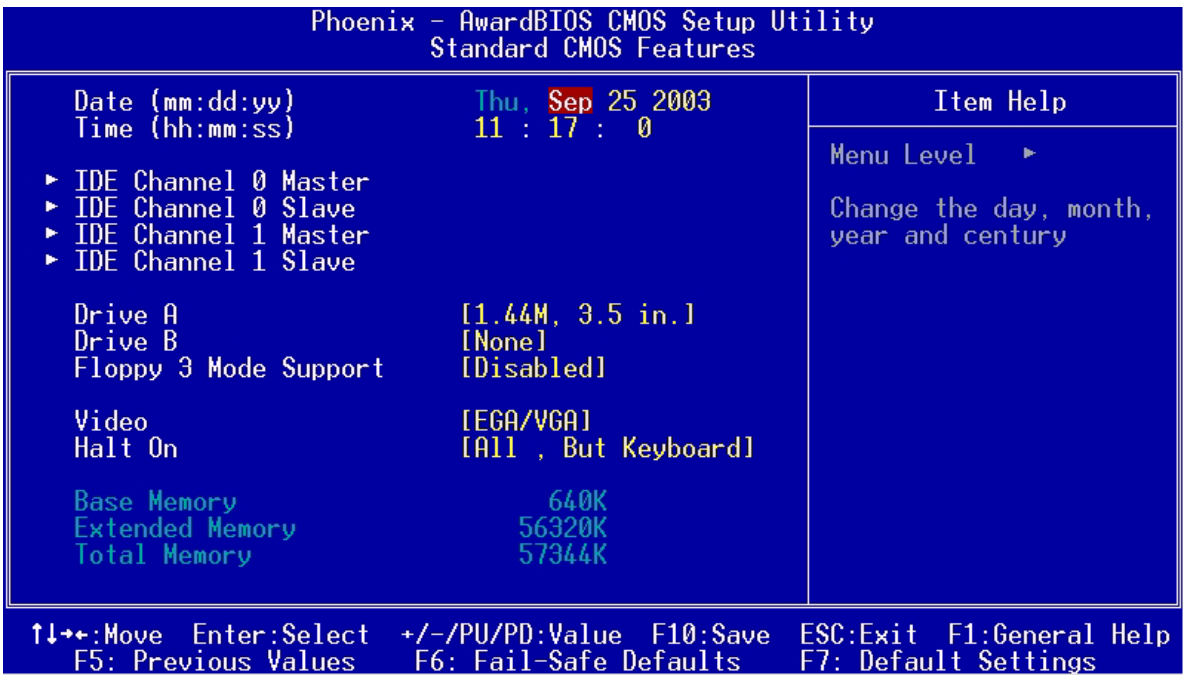
The following table describes the parameters found in this menu:

Parameter	Description
Product Name	Displays the model name of your system.
System S/N	Displays your system's serial number.
Main Board ID	Displays the main board's identification number.
Main Board S/N	Displays your main board's serial number.
System BIOS Version	Specifies the version of your BIOS utility.
SMBIOS version	The System Management Interface (SM) BIOS allows you to check your system hardware components without actually opening your system. Hardware checking is done via software during start up. This parameter specifies the version of the SMBIOS utility installed in your system.
BIOS Release Date	Displays the release date of the BIOS utility.

Standard CMOS Features

Select Standard CMOS Features from the main menu to configure some basic parameters in your system.

The following screen shows the Standard CMOS Features menu:



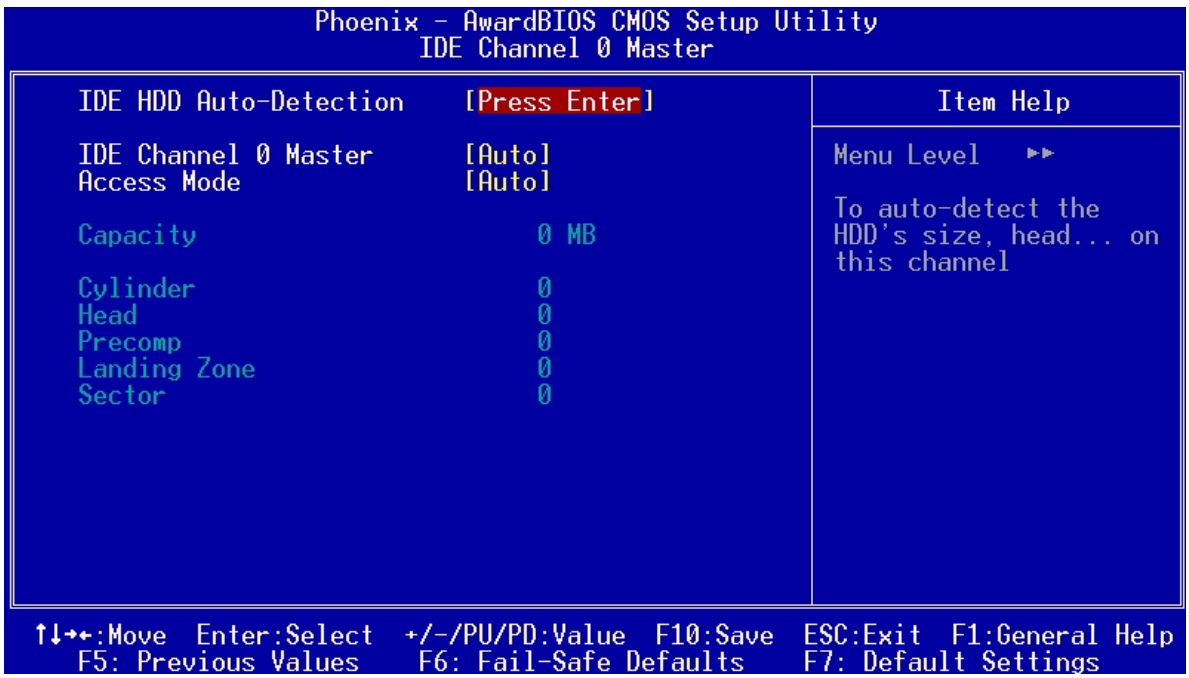
The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Date	Lets you set the date following the weekday-month-day-year format	Weekday: Sun, Mon...Sat Month: Jan, Feb...Dec. Day: 1 to 30 Year: 1980 to 2079
Time	Lets you set the time following the hour-minute-second format	Hour: 0 to 23 Minute: 0 to 59 Second: 0 to 59
IDE Channel 0 Master	Allows you to configure the hard disk drive connected to the master port of IDE channel 0. To enter the IDE Channel 0 Master setup, press [Enter]. The IDE CD-ROM is always automatically detected.	IDE Device Model Number: None
IDE Channel 0 Slave	Allows you to configure the hard disk drive connected to the slave port of IDE channel 0. To enter the IDE Channel 0 Slave setup, press [Enter]. The IDE CD-ROM is always automatically detected.	IDE Device Model Number: None

Parameter	Description	Options
IDE Channel 1 Master	Allows you to configure the hard disk drive connected to the master port of IDE channel 1. To enter the IDE Channel 1 Master setup, press [Enter]. The IDE CD-ROM is always automatically detected.	IDE Device Model Number: None
IDE Channel 1 Slave	Allows you to configure the hard disk drive connected to the slave port of IDE channel 1. To enter the IDE Channel 1 Slave setup, press [Enter]. The IDE CD-ROM is always automatically detected.	IDE Device Model Number: None
Drive A	Allows you to configure your floppy drive A.	**1.44 MB, 3.5-inch** None 360 KB, 5.25-inch 1.2 MB, 5.25-inch 720 KB, 3.5-inch 2.88 MB, 3.5-inch
Drive B	Allows you to configure your floppy drive B.	1.44 MB, 3.5-inch **None** 360 KB, 5.25-inch 1.2 MB, 5.25-inch 720 KB, 3.5-inch 2.88 MB, 3.5-inch
Floppy 3 Mode Support	Floppy 3 is the standard Japanese floppy drive mode. Supported by the BIOS, the selected diskette drive can read 720KB, 1.2MB and 1.44MB on a 3.5” diskette.	**Disabled**, Enabled
Video	This item specifies the type of video card in use. The default setting is VGA/EGA. Since current PCs use VGA only, this function is almost useless and may be disregarded in the future.	**VGA/EGA** CGA40 CGA80 Mono
Halt On	This parameter enables you to control the system stops in case of Power On Self Test errors (POST).	**All Errors** No Errors All but Keyboard All but Diskette All by Disk/Key
Base Memory	Refers to the option of memory that is available to standard DOS programs. DOS systems have an address space od 1MB, but the top 384KB (called high memory) is reserved for system use. This leaves 640 KB of conventional memory. Everything above 1MB is either extended or extended memory.	
Extended Memory	Memory above and beyond the standard 1MB of base memory that DOS supports. Extended memory is only available in PCs with an Intel 80286 or later microprocessor. Extended memory is not configured in any special manner and is therefore unavailable to most DOS programs. However, MS Windows and OS/2 can use extended memory.	
Total Memory	Total based and extended memory, and I/O ROM 384KB available to the system.	

IDE Channel 0/1 Master/Slave Setup

The following screen appears if you select any of the IDE drive parameters:

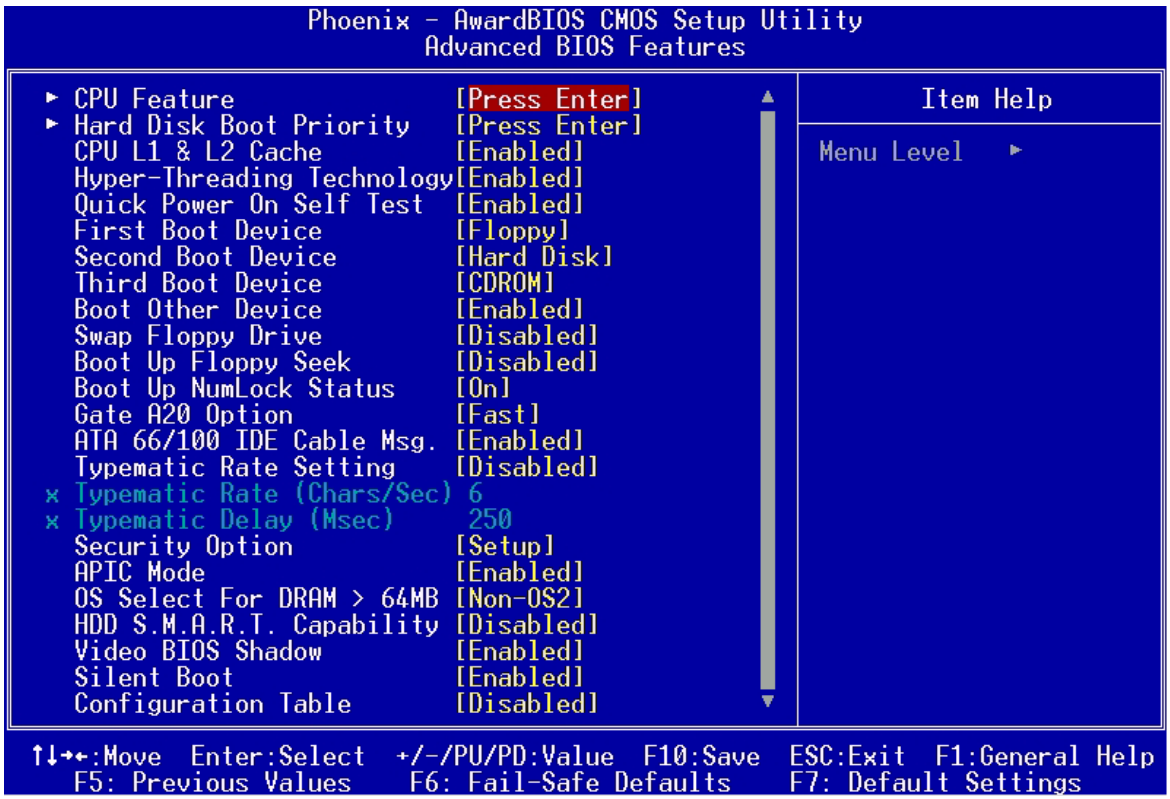


The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
IDE HDD Auto-Detection	Auto-detects your hard disk drive	**Press [Enter]**
IDE Channel 0 Master IDE Channel 0 slave IDE Channel 1 Master IDE Channel 1 Slave	Display the type of device installed.	**Auto** None Manual
Access Mode	Selects the HDD access mode	**Auto** Large LBA CHS
Capacity	Shows the size of your HDD in MB	xxxxx MB
Cylinder	Shows your hard disk's numberof cylinders	0 to 65535
Head	Shows your hard disk's number of heads	0 to 255
Precomp	Selects the precomp number for old HDD parking	0 to 65535
Landing Zone	Selects the Land Zone number for old HDD parking	0 to 65535
Sector	Shows your hard disk's number of sectors	0 to 255

Advanced BIOS Features

The following screen shows the Advanced BIOS Features:



The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

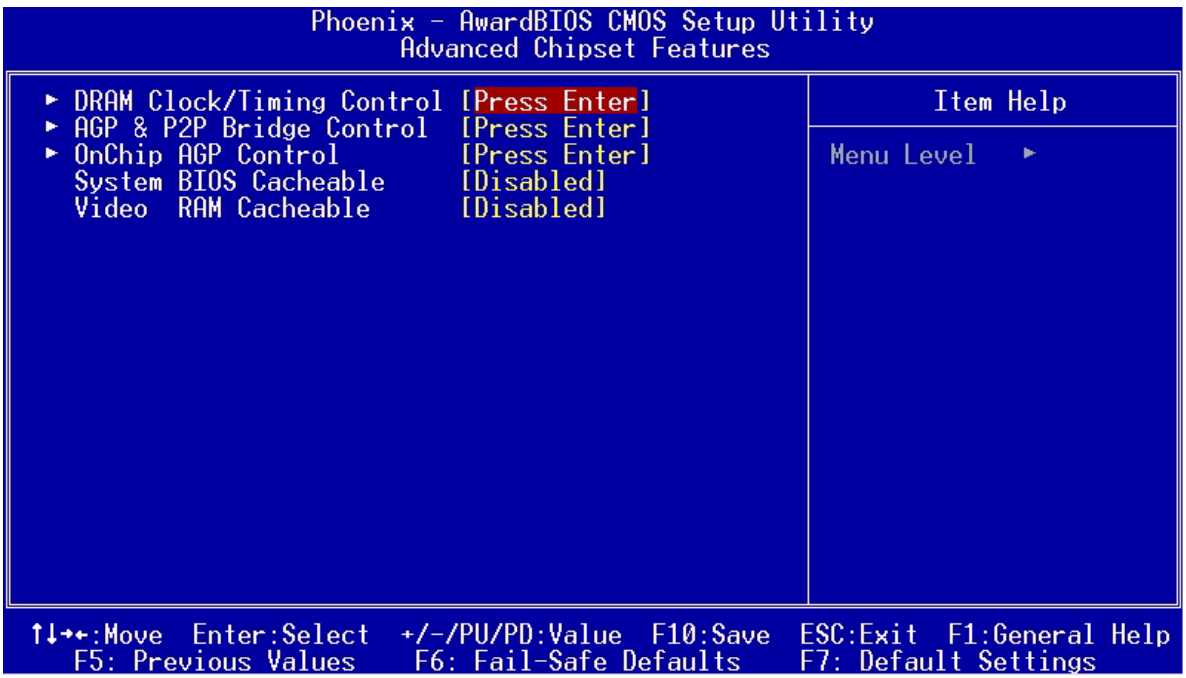
Parameter	Description	Options
CPU Feature	The items allow you to set the Thermal Monitor 1 (on die throtting) and the Thermal Monitor 2 (on ratio & VID transition).	**Press [Enter]**
Hard Disk Boot Priority	Selects the hard disk boot priority.	**Press [Enter]**
CPU L1 & L2 Cache	Uses internal level 1 (L1) and external level 2 (L2) cache memory to improve performance.	**Enabled** Disbaled
Hyper-Threading Technology	This item is only available when CPU and the chipset support Hyper-Threading.	**Enabled** Disbaled
Quick Power On Self Test	This parameter speeds up POST by skipping some items that are normally checked.	**Enabled** Disbaled
First / Second / Third Boot Device	The items allow you to set the sequence of boot device where BIOS attempts to load the disk operating system.	Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP, LAN, Disabled (Disable this sequence). The sequence following the order of HDD, Floppy and CD-ROM is recommended.
Boot Other Device	This parameter allows you to specify the system boot up search sequence.	**Enabled** Disbaled

Parameter	Description	Options
Swap Floppy Drive	Setting to Enabled will swap floppy drive a: and b:.	Enabled **Disabled**
Boot Up Floppy Seek	Setting to Enabled will make BIOS seek floppy drive a: before booting the system.	Enabled **Disabled**
Boot Up NumLock Status	Sets the NumLock status when the system is powered on. Setting to On will turn on the NumLock key when the system is powered on. Setting to Off will allows users to use the arrow keys on the numeric keypad.	**On** Off
Gate A20 Option	This item is to set the Gate A20 status. A20 refers to the first 64KB of extended memory. When the default value Fast is selected, the Gate A20 is controlled by port 92 or chipset specific method resulting in faster system performance. When Normal is selected, A20 is controlled by a keyboard controller or chipset hardware.	**Fast** Normal
ATA 66/100 IDE Cable Msg.	This item enables or disables the display of the ATA 66/100 IDE Cable Msg.	**Enabled** Disbaled
Typematic Rate Setting	This item is used to enable or disable the typematic rate setting including Typematic Rate and Typematic Deplay.	Enabled **Disabled**
Typematic Rate	After Typematic Rate Setting is enabled, this item allows you to set the rate (characters/ second) at which at keys are accelerated.	Settings: 6,8,10,12,15,20,24 and 30.
Typematic Delay	This item allows you to select the delay between when the key was first pressed and when the acceleration begins	Settings: 250, 500, 750 and 1000.
Security Option	Specifies the type of BIOS password protection that is implemented. Setup means that the password prompt appears only when end users try to run Setup. System means that a password prompt appears every time when the computer is powered on or when end users try to run Setup.	**Setup** System
APIC Mode	This field is used to enable or disable the APIC (Advanced Programmable Interrupt Controller). Due to compliance with PC2001 design guide, the system is able to run in APIC mode. Enabling APIC mode will expand available IRQ resources from the system.	**Enabled** Disabled
OS Select For DRAM > 64MB	This item is only required if you have installed more than 64MB of memory and you are running the OS/2 operating system.	**Non-OS2** OS2
HDD S.M.A.R.T Capability	The S.M.A.R.T (Self-Monitoring, Analysis, and Reporting Technology) system is a diagnostics technology that monitors and predicts device performance.	Enabled **Disabled**
Video BIOS Shadow	This item determines whether the BIOS will be copied to RAM for faster execution.	**Enabled** Disabled
Silent Boot	Enables or disables the display of the logo during boot.	**Enabled** Disabled
Configuration Table	Enables or disables the configuration table.	Enabled **Disabled**

Advanced Chipset Features

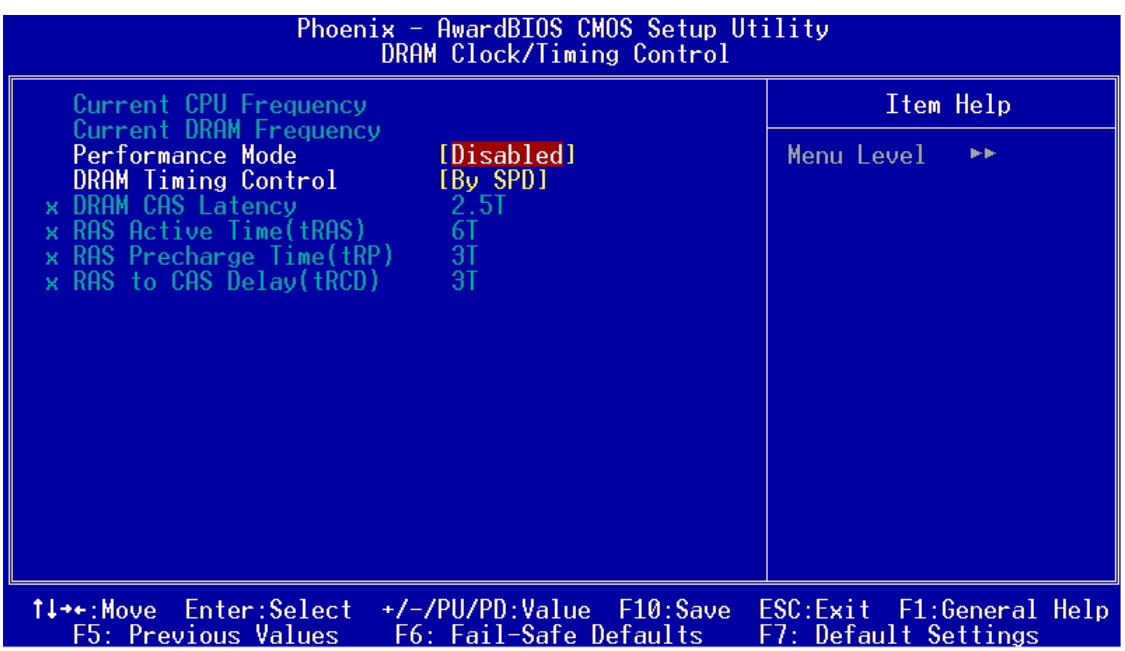
The advanced cipset features setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.

NOTE: Change these settings only if you are familiar with the chipset.



DRAM Clock/Timing Control

Press [Enter] to enter the sub-menu and the following screen appears:



The following table describes each parameter under the sub-menu. Settings in **boldface** are the default and suggested values.

Parameter	Description	Options
Current CPU Frequency / Current DRAM Frequency	Shows the CPU and DRAM frequency.	
Performance Mode	Enables this item to enhance the system performance.	Enabled **Disabled**
DRAM Timing Control	Enables you to select the CAS latency time in HCLKs of 2, 2.5, or 3. The value is set at the factory depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU.	**By SPD** Manual
DRAM CAS Latency	This item controls the timing delay (in clock cycles) before the DRAM starts a read command after receiving it.	2T, **2.5T**, 3T
RAS Active Time(tRAS)	This item allows you to set the amount of time a RAS can be kept open for multiple accesses. High figures will improve performance.	4T, 5T, **6T**, 7T, 8T, 9T
RAS Precharge Time(tRP)	This is the duration of the time interval during which the Row Address Strobe signal to a DRAM is held low during normal Read and Write Cycles. This is the minimum interval between completing one read or write and starting another from the same (non-page mode) DRAM. Techniques such as memory interleaving, or use of Page Mode DRAM are often used to avoid this delay. Some chipsets require this parameter in order to set up the memory configuration properly. The RAS Precharge value is typically about the same as the RAM Access (data read/write) time.	2T, **3T**, 4T, 5T
RAS to CAS Delay(tRCD)	This is the amount of time a CAS is performed after a RAS. The lower the better, but some DRAM does not support low figures.	2T, **3T**, 4T, 5T

The other two parameters under the Advanced Chipset Features are presented below. Settings in **boldface** are the deafult and suggested values.

AGP & P2P Bridge Control

Press [Enter] to enter the sub-menu and the following screen appears:

Parameter	Description	Options
AGP Aperture Size	This setting controls just how much system RAM can be allocated to AGP for video purposes. The aperture is a portion of the PCI memory address range dedicated to graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.	32MB, 64MB, **128MB**, 256MB, 512MB
Graphic Window WR Combin	This item determines whether the graphic windows base address is valid or not.	**Enabled** Disabled
AGP Fast Write Support	Enables and disables AGP Fast Write Support.	**Disabled** Enabled
AGP Data Rate	This item allows you to control AGP card data transfer rate.	**Auto**, 1x, 2x, 4x ,8x

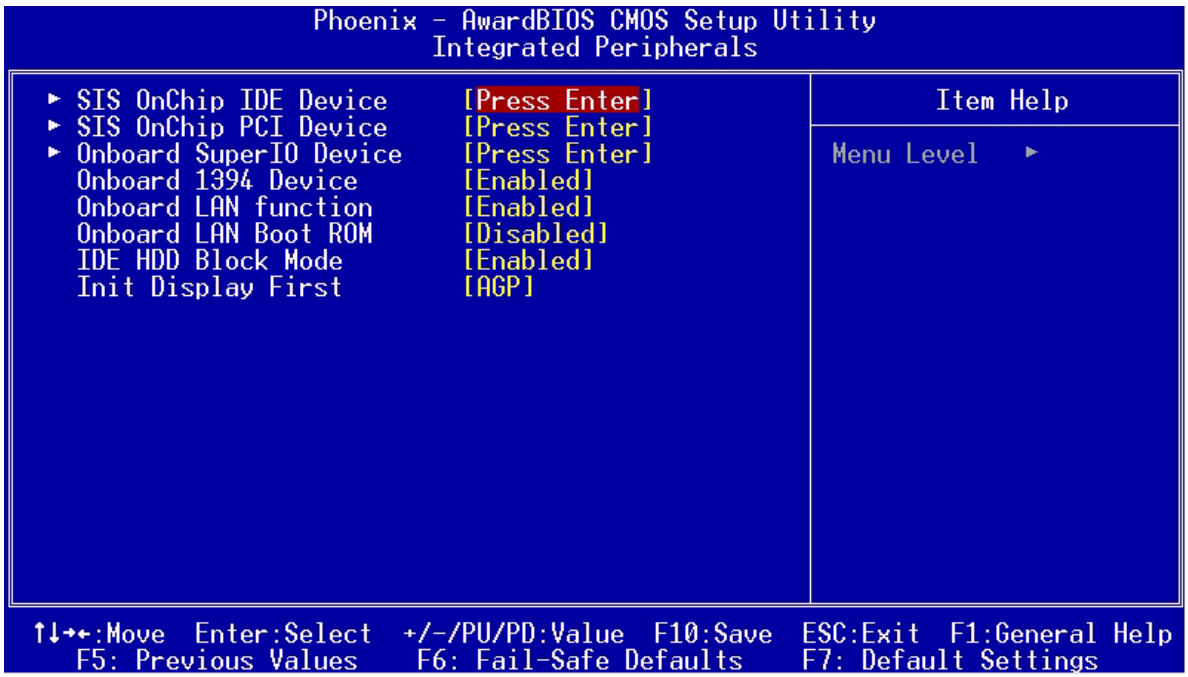
OnChip AGP Control

Press [Enter] to enter the sub-menu and the following screen appears:

Parameter	Description	Options
VGA Share Memory Size	Selects the VGA share memory size	16, **32MB**, 64MB, 128MB

Parameter	Description	Options
System BIOS Cacheable	Enables or disables the system BIOS cacheable.	**Disabled** Enabled
Video RAM Cacheable	Enables or disables the video RAM cacheable.	**Disabled** Enabled

Integrated Peripherals



The following table describes each Integrated Peripherals parameters. Settings in **boldface** are the default and suggested values.

SIS OnChip IDE Device

Press [Enter] to enter the sub-menu and the following screen appears:

Parameter	Description	Options
Internal PCI/IDE	This setting enables or disables the internal primary and secondary PCI & IDE controllers.	**Both**, Disabled, Primary, Secondary
IDE Primary Master PIO IDE Primary Slave PIO IDE Secondary Master PIO IDE Secondary Slave PIO	Setting these items to "Auto" activates the HDD speed auto-detect function. The PIO mode specifies the data transfer rate of the HDD. For example, mode 0 data transfer rate is 3.3MB/s, mode 1 is 5.2 MB/s, mode 2 is 8.3MB/s, mode 3 is 11.1 MB/s and mode 4 is 16.6MB/s. If your hard disk performance becomes unstable, you may manually try the slower mode.	**Auto,** mode 1, mode 2, mode 3 and mode 4
Primary Master UltraDMA Primary Salve UltraDMA Secondary Master UltraDMA Secondary Slave UltraDMA	These items allow you to set the Ultra DMA 33/66/100 mode supported by the hard disk drive connected to your primary and secondary IDE connectors.	**Auto** Disables
IDE DMA Transfer Access	This item allows you to enabled the transfer access of the IDE DMA.	**Enabled** Disabled
IDE Burst Mode	This allows your hard disk controller to use the fast block mode to transfer data to and from the hard disk drive.	**Enabled** Disabled

SIS OnChip PCI Device

Press [Enter] to enter the sub-menu and the following screen appears:

Parameter	Description	Options
USB Controller	This item enables the USB controller. Leave this at the default “Enabled”, if you want to connect USB devices to your computer.	**Enabled** Disabled
USB Ports Number	This item enables you to determine the number of USB ports.	**6 Potrs** 5 Potrs 4 Potrs 3 Potrs
USB 2.0 Support	Enable this item if the system supports USB 2.0	**Enabled** Disabled
USB Legacy Support	This item allows the BIOS to interact with a USB keyboard or mouse to work with MS-DOS based utilities and non-Windows modes.	**Enabled** Disabled
USB Mouse Support	This item lets you enable or disable the USB mouse driver within the onboard BIOS. The keyboard driver simulates legacy mouse command and lets you use a USB mouse during POST or after boot if you do not have a USB driver in the operating system.	Enabled **Disabled**
SIS AC97 AUDIO	This option allows you to control the onboard AC97 audio. Disable this item if you are going to install a PCI audio add-on card.	**Enabled** Disabled
SIS Serial ATA Controller	This item allows you to control the SiS Serial ATA controller.	**Enabled** Disabled
SIS Serial ATA Mode	This item allows you to change SiS Serial ATA mode.	**IDE** RAID

Onboard SuperIO Device

Press [Enter] to enter the sub-menu and the following screen appears:

Parameter	Description	Options
Onboard FDC Controller	Enables or disables the onboard floppy disk drive controller.	**Enabled** Disabled
Onboard Serial Port 1	This option is used to assign the I/O address and interrupt request (IRQ) for onboard serial port 1 (COM1).	Disable, **3F8/IRQ4**, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto
Onboard Serial Port 2	This option is used to assign the I/O address and interrupt request (IRQ) for onboard serial port 1 (COM2).	Disable, 3F8/IRQ4, **2F8/IRQ3**, 3E8/IRQ4, 2E8/IRQ3, Auto
Onboard Parallel Port	This option is used to assign the I/O address and interrupt request (IRQ) for the onboard parallel port.	Disabled, **378/IRQ7**, 278/IRQ5, 3BC/IRQ7
Parallel Port Mode	Enables you to set the data transfer protocol for your parallel port. SPP (Standard Parallel Port), EPP (Enhanced Parallel Port), ECP (Extended Capabilities Port) and ECP+EPP.	SPP, EPP, **ECP**, ECP+EPP
ECP Mode Use DMA	When the onboard parallel port is set to ECP mode, the parallel port can use DMA 3 or DMA 1.	**3**, 1

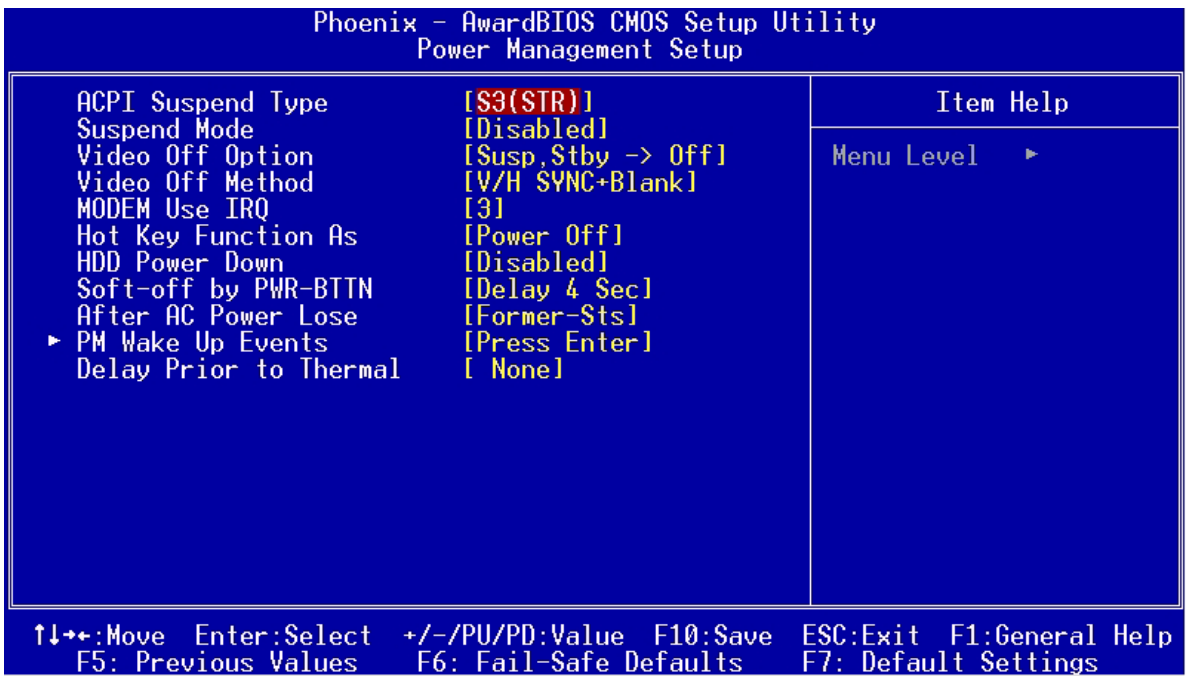
Parameter	Description	Options
SIS Serial ATA Controller	This item allows you to control the SiS Serial ATA controller.	**Enabled** Disabled
SIS Serial ATA Mode	This item allows you to change SiS Serial ATA mode.	**IDE** RAID

Parameter	Description	Options
Onboard 1394 Device (optional)	Enables or disables the onboard 1394.	**Enabled** Disabled
Onboard LAN function	Enables and disables the onboard LAN.	**Enabled** Disabled
Onboard LAN Boot ROM	Use this item to enable and disable the booting from the onboard LAN or a network add-in card with a remote boot ROM installed.	Enabled **Disabled**
IDE HDD Block Mode	Enable this field if your IDE hard drive supports block mode. Block mode enables BIOS to automatically detect the optimal number of block read and writes per sector that the drive can support. It also improves the speed of access to IDE devices.	**Enabled** Disabled
Init Display First	Use this item to specify whether your graphics adapter is installed in one of the PCI slots or is integrated on the motherboard.	**PCI Slot** AGP

Power Management Setup

The Power Management menu lets you configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

The following screen shows the Power Management parameters and their default settings:



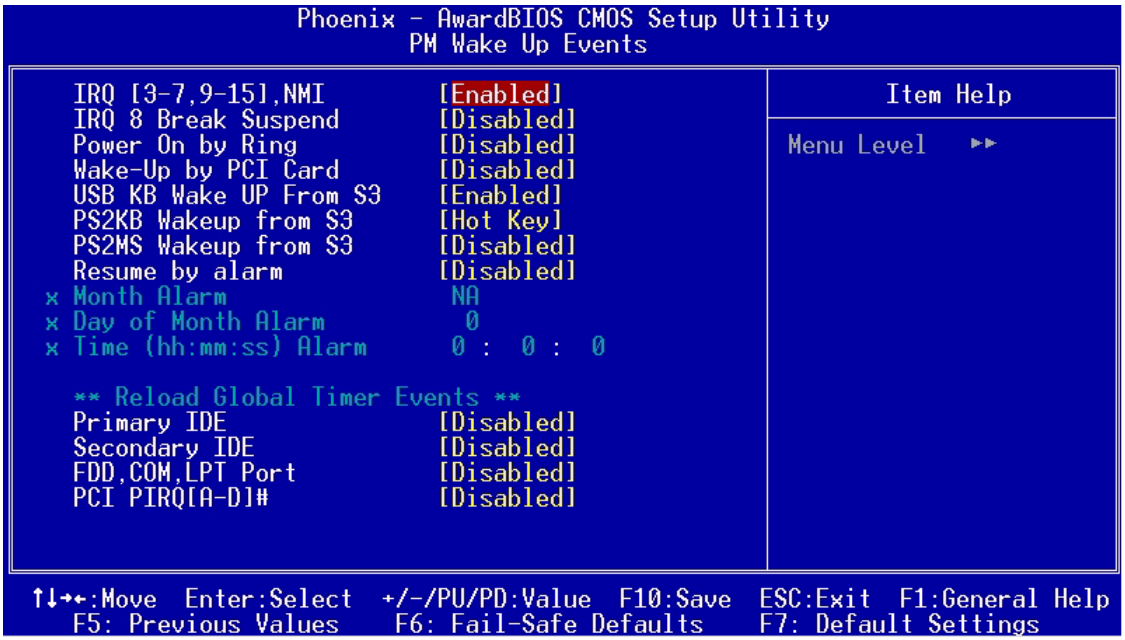
The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
ACPI Suspend Type	This item specifies the power saving modes for ACPI function. S1(POS): The S1 sleep mode is a low power state. In this state, no system context (CPU or chipset) is lost and hardware maintains all system context. S3 (STR): The S3 sleep mode is s power-down state in which power is supplied only to essential components such as main memory and wake-capable devices and all system context is saved to main memory. The information stored in memory will be used to restore the PC to the previous state when an *wake-up* event occurs. S1&S3: Both S1 and S3 will be adopted.	**S3** S1 S1&S3
Suspend Mode	The CPU clock will be stopped and the video signal will be suspended if no Power Management events occur for a specified length of time. Full power function will return when a Power Management event is detected.	**Disabled**, 1 Min, 2 Min, 4 Min, 8 Min, 12 Min, 20 Min, 30 Min, 40 Min, 1Hour

Parameter	Description	Options
Video Off Option	This item is to control the mode in which the monitor will shut down. Always On: Always keep the monitor on. Suspend --> Off: During suspend mode, the monitorwill shut down. Susp, Stby --> During suspend or standby mode, the monitor will shut down. All Modes --> Off: The monitor is turned off during doze, standby or suspend mode.	Always On Suspend Off **Susp, Stby --> Off** All Modes
Video Off Method	This item determines the manner in which the monitor is blanked. V/H SYNC+Blank: This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer. Blank Screen: This option only write blanks to the video buffer. DPMS Supported: Initial display power management signaling.	**V/H SYNC+Blank** Blank Screen DPMS Supported
Modem Use IRQ	This setting names the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of selected IRQ always awakens the system.	**3**, 4, 5, 7, 9, 10, 11, AUTO
Hot Key Function As	This option allows you to set the Hot Key functionality	Disable **Power Off** Suspend
HDD Power Down	If HDD activity is not detected for the length of time specified in this field, the hard disk drive will be powered down while all other devices remain active.	**Disabled** 1~15 Mins
Soft-off by PWR-BTTN	This feature allows users to configure the power button function.	**Instant Off**: The power button functions as a normal power-on/-off button. Delay 4 Sec: When you press the power button, the computer enters the suspend/ sleep mode, but if the button is pressed for more than four seconds, the computer will be turned off.
Aftrer PC Power Lose	This item specifies when your system reboot after a power failure or interrupt occurs.	**Off** On Former-Sts
Delay Prior to Thermal	Enables you to set the delay time before the CPU enters auto thermal mode.	**None** 1 Min, 2 Min, 4 Min, 8 Min, 16 Min, 32 Min, 64 Min

PM Wake Up Events

Press [Enter] to enter the sub-menu and the following screen appears:

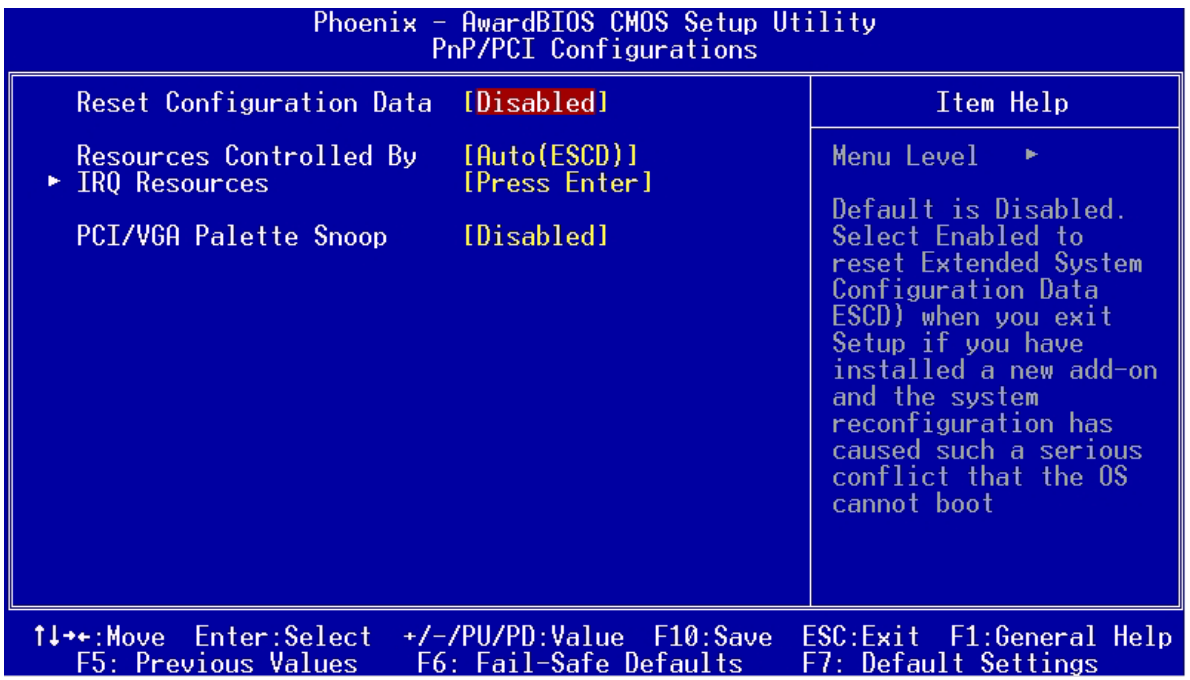


The following table describes each parameter under the sub-menu. Settings in **boldface** are the default and suggested values.

Parameter	Description	Options
IRQ [3-7, 9-15], NMI	This option determines whether any activity for IRQ 3-7/9-15 will cause the system to wake from a power saving mode.	**Enabled** Disabled
IRQ 8 Break Suspend	Determines whether the system will monitor IRQ 8 activity and wake the system from a power saving mode when IRQ 8 is activated.	Enabled **Disabled**
Power On by Ring	An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.	Enabled **Disabled**
Wake-Up by PCI Card	This item specifies whether the system will be awakened from power saving modes when activity or input signal of the specified hardware peripheral or component is detected.	**Enabled** Disabled
USB Port Wakeup from S3	This option allows you to specify whether the system will be awakened from power saving modes when activity or input signal of the specified hardware peripheral or component is detected.	Enabled **Disabled**
PS2KB Wakeup from S3	This option allows you to set hot key combination to turn on the system by keyboard.	**Hot Key**
PS2MS Wakeup from S3	This option allows you to set the mouse action to turn on the system.	Enabled **Disabled**
Resume by Alarm	When set to Enabled, the following three fields become available: Month Alarm, Day of Month Alarm, and Time Alarm Upon arrival of the alarm time, it will instruct the system to wake up.	Enabled **Disabled**

Parameter	Description	Options
Primary/Secondary IDE	When this item is enabled, the system power will resume the system from a power saving mode if there is any activity on primary or secondary IDE channels 0 or 1.	Enabled **Disabled**
FDD, COM, LPT Port	When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the floppy disk drive, serial ports, or the parallel port.	Enabled **Disabled**
PCI PIRQ[A-D]#	When this item is enabled, any activity from one of the listed devices wakes up the system.	Enabled **Disabled**

PnP/PCI Configuration

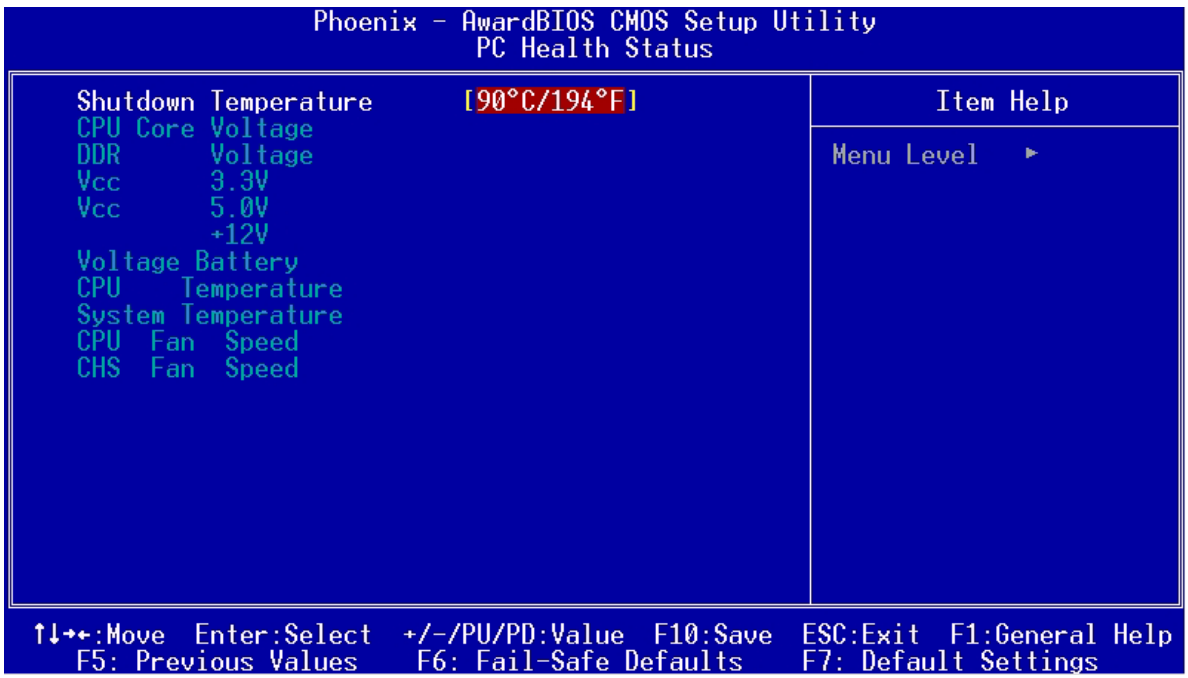


The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Reset Configuration Data	Selecting "Enabled" to reset Extended System Configuration Data (ESCD) only if you installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot. Otherwise, you should leave it unchanged.	**Disabled** Enabled
Resources Controlled By	This BIOS can automatically configure all of the boot and Plug and Play compatible devices. You can also set it as Manual and go into each of the sub menu to choose specific resources.	**Auto (ESCD)** Manual
IRQ Resources	The items are adjustable only when "Resources Controlled By" is set to Manual. By pressing "Enter" to access the sub menu.	**PCI Device** Reserved
PCI/VGA Palette Snoop	Disabled - Data read or written by the CPU is only directed to the PCI VGA device's palette registers. Enabled - Data read or written by the CPU is directed to both the PCI VGA device's palette registers and the ISA VGA device's palette registers, permitting the palette registers of both VGA devices to be identical.	**Disabled** Enabled *If any ISA bus adapter in the system requires VGA Palette snooping, the setting must be set to "Enabled".

NOTE: It is strongly recommended that only experienced users should make any changes to the default settings.

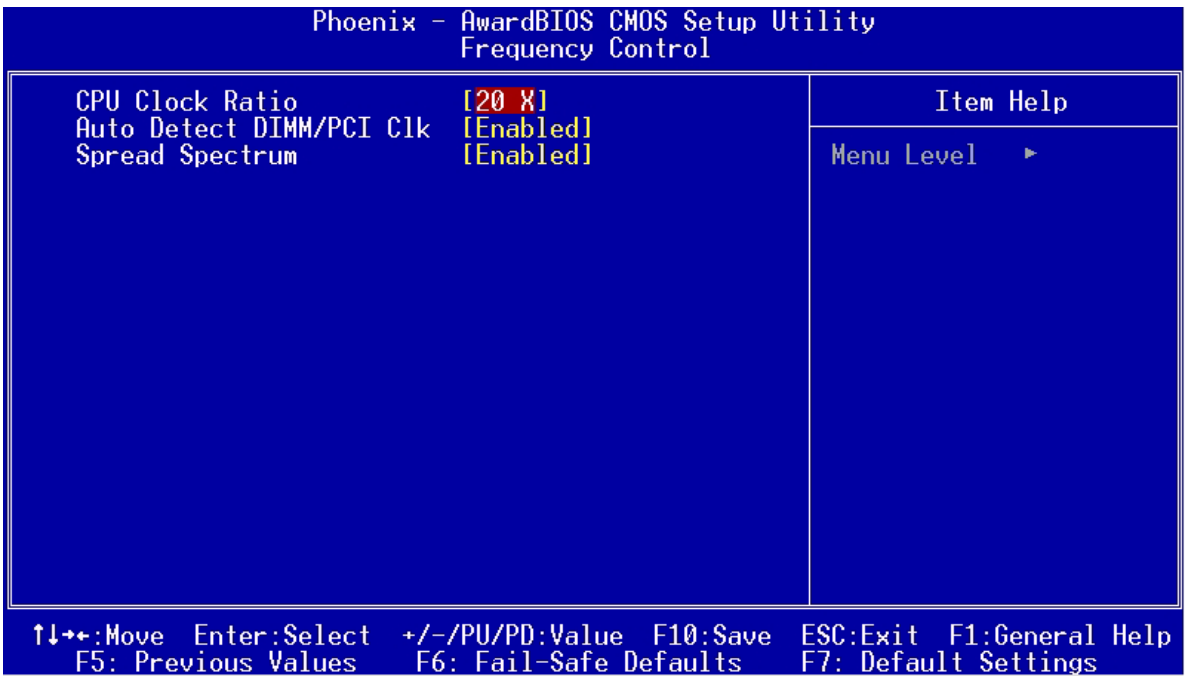
PC Health Status



The following table describes the parameters found in this menu:

Parameter	Description	Options
Shutdown Temperature	This option is for setting the shutdown temperature level for the processor. When the processor reaches the temperature you set, the ACPI-aware system will be shut down.	
System Component Characteristics	These items display the current status of all of the mainboard hardware devices/components such as CPU voltages, temperatures and all fans' speeds.	

Frequency/Voltage Control

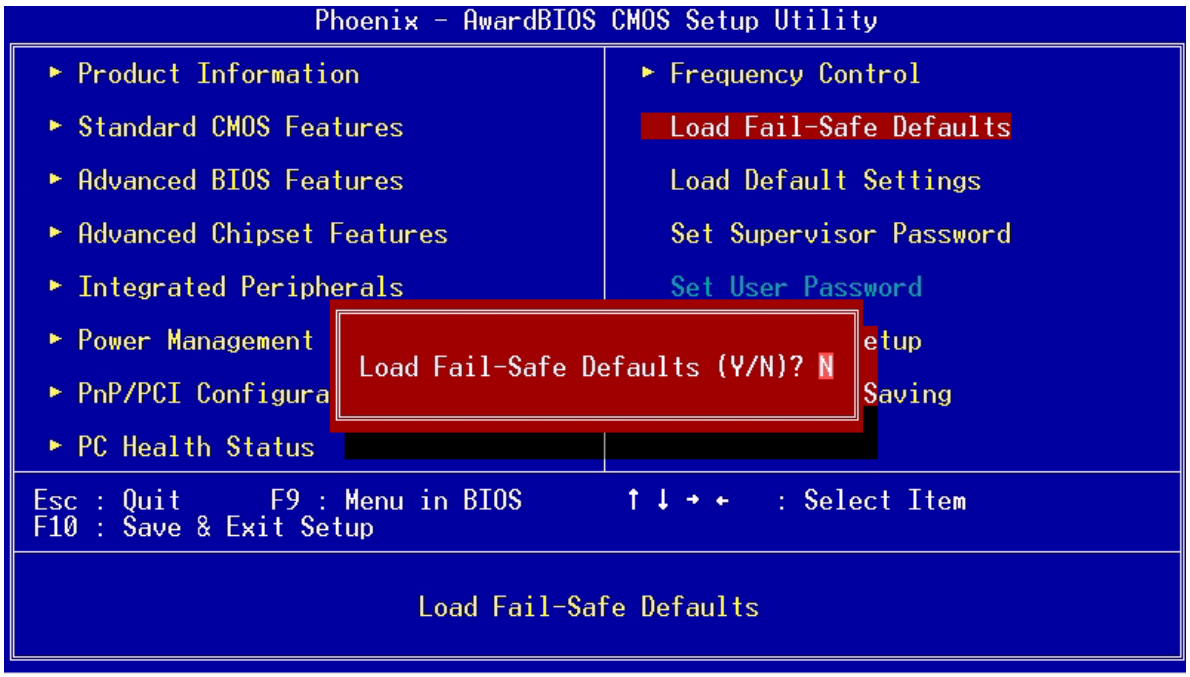


The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
CPU Clock Ratio	If the CPU Ratio is set to Manual, end users can choose a suitable ratioto support the CPU.	8x to 50x
Auto Detect DIMM/PCI Clk	This option allows you to enable/disable the feature of auto detecting the clock frequency of the installed DIMM/PCI bus.	**Enabled** Disabled
Spread Spectrum	When the motherboard's clock generator pulses, the extreme values (spikes) of the pulses creates EMI (Electromagnetic Interference). The spread Spectrum function reduces the EMI generated by modulating the pulses so that the spikes of the pulses are reduced to flatter curves. If you do not have any EMI problem, leave the setting at Disabled for optimal system stability and performance. But if you are plagued by EMI, setting to Enabled for EMI reduction. Remember to disable Spread Spectrum if you are overlocking because even a slight jitter can introduce a temporary boost in clockspeed which may just cause your overlock ed processor to lock up.	**Enabled** Disabled

Load Fail-Safe Defaults

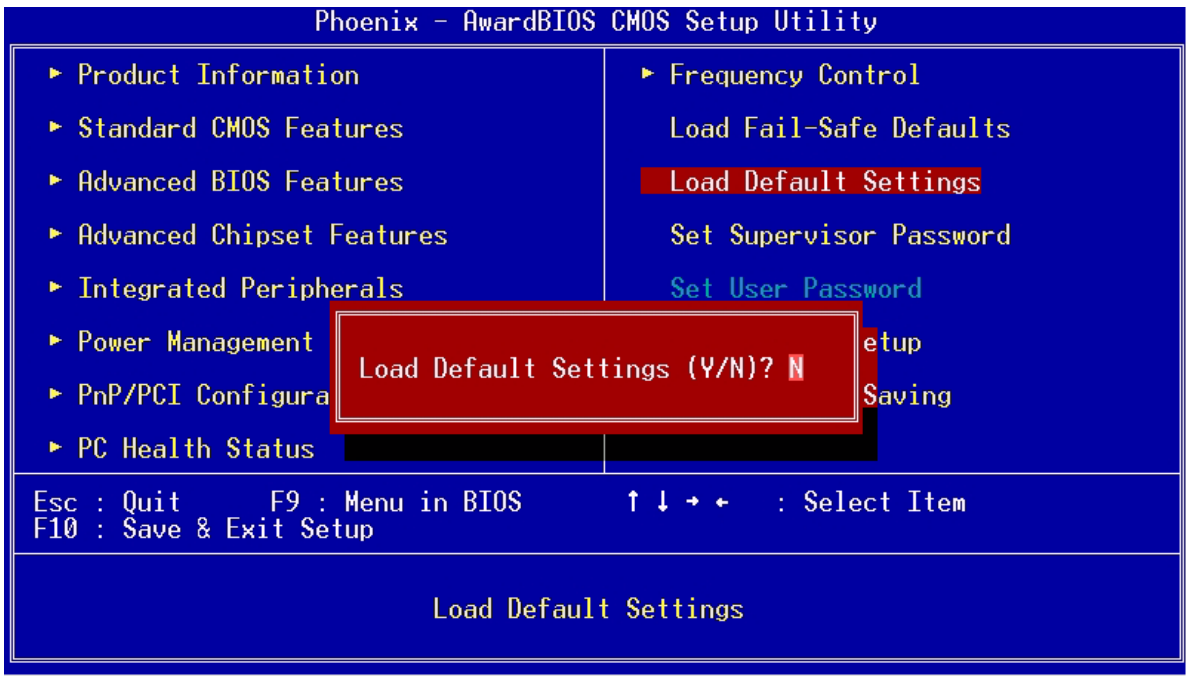
This option opens a dialog box that lets you install fail-safe defaults for all appropriate items in the Setup Utility:



Press <Y> and then <Enter> to install the defaults. Press <N> and then <Enter> to not install the defaults. The fail-safe defaults place no great demands on the system and are generally stable. If your system is not functioning correctly, try installing the fail-safe defaults as a first step in getting your system working properly again. If you only want to install fail-safe defaults for a specific option, select and display that option.

Load Default Settings

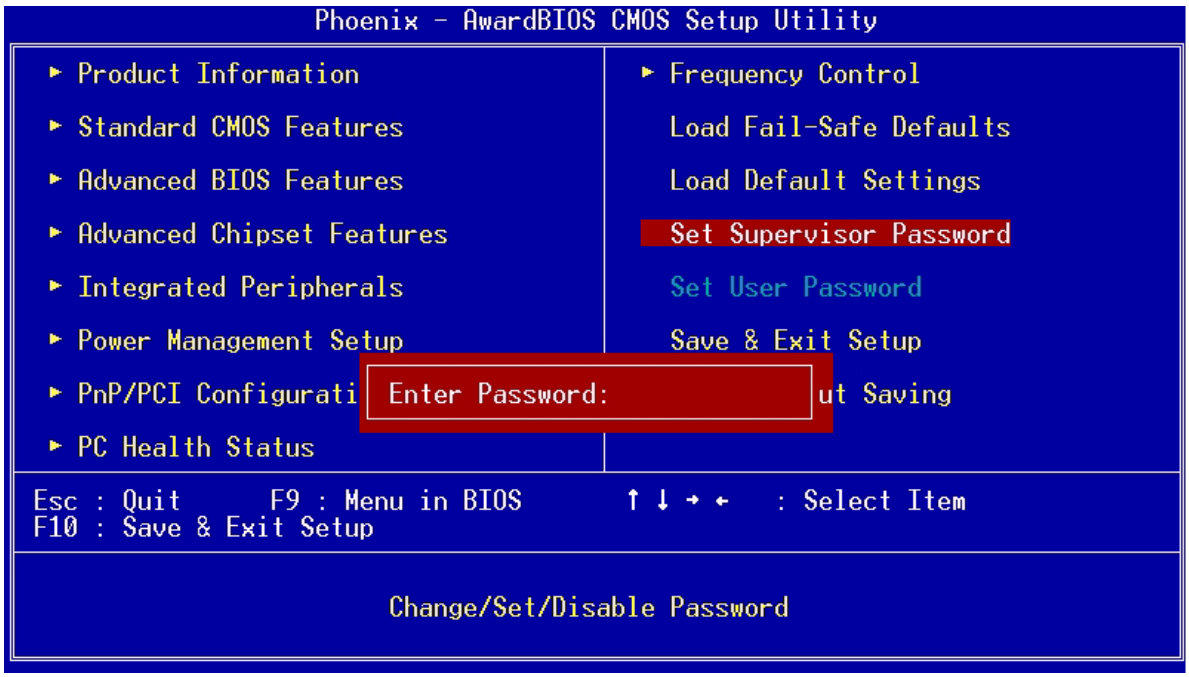
This option opens a dialog box that lets you install defaults for all appropriate items in the Setup Utility.



Press <Y> and then <Enter> to install the defaults. Press <N> and then <Enter> to not install the defaults. The defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. If you only want to install setup defaults for a specific option, select and display that option.

Set Supervisor/User Password

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.



Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

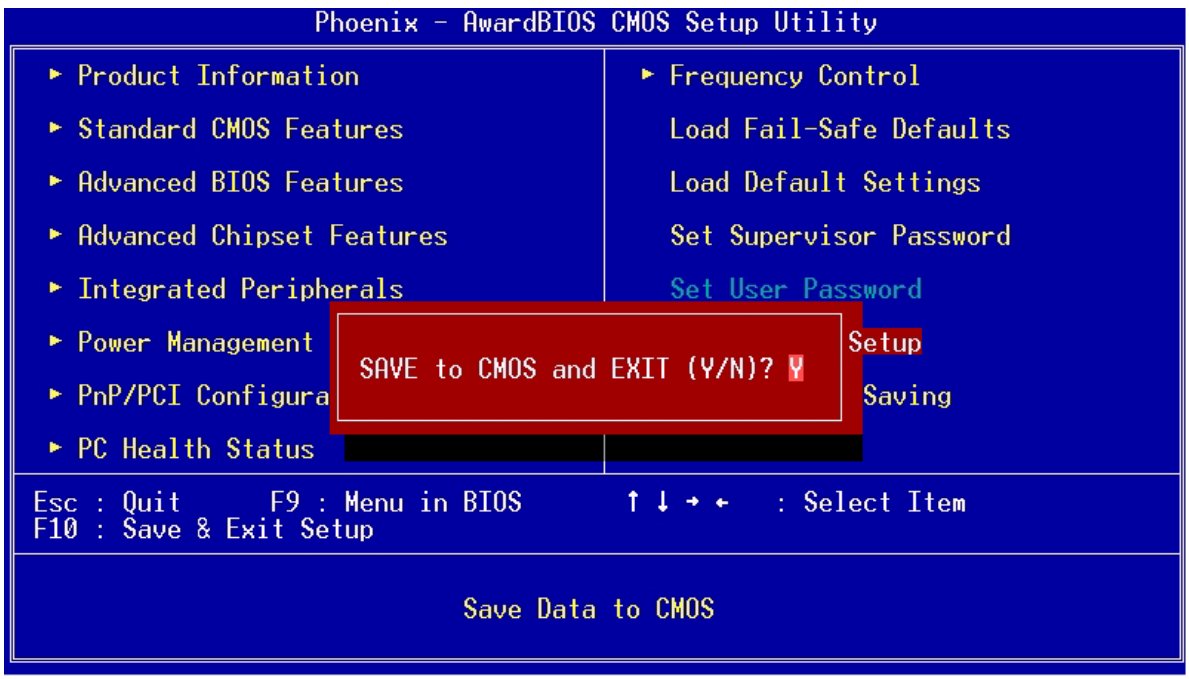
If you have selected “System” in “Security Option” of “BIOS Features Setup” menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected “Setup” at “Security Option” from “BIOS Features Setup” menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

Save & Exit Setup

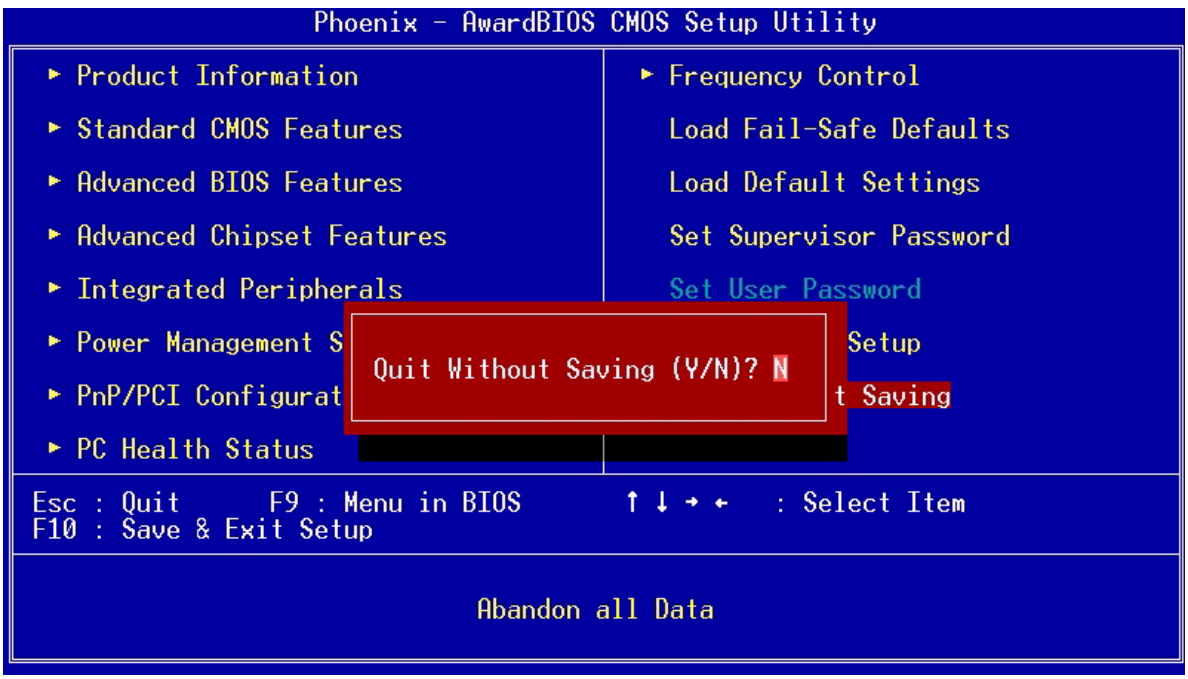
Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility.



When the Save and Exit dialog box appears, press <Y> to save and exit, or press <N> to return to the main menu.

Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility.



When the Exit Without Saving dialog box appears, press <Y> to discard changes and exit, or press <N> to return to the main menu.

NOTE: If you have made settings that you do not want to save, use the "Exit Without Saving" item and press <Y> to discard any changes you have made.

Machine Disassembly and Replacement

Please also refer to the AcerPower F1 Service CD for the assembly/disassembly procedure.

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge.
- Wire cutter.
- Phillips screwdriver (may require different size).

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatches when putting back the components.

NOTE: The AcerPower F1 mechanical housing is similar with AcerPower SV.

General Information

Before You Begin

Before proceeding with the disassenbly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.

Standard Disassembly Procedure

This section tells you how to disassemble the system when you need to perform system service. Please also refer to the disassembly video, if available.

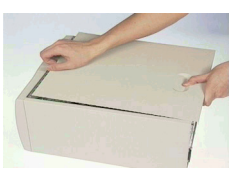
CAUTION: Before you proceed, make sure you have turned off the system and all peripherals connected to it.

Opening the System

1. Place the system unit on a flat, steady surface.

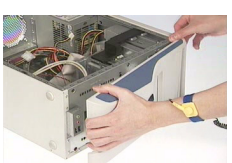
2. Turn the housing back, and remove the screws as shown here.

3. Slide the side door out. Then remove it.



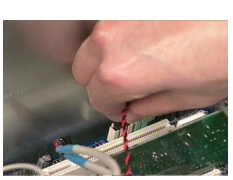
Removing the Front Panel

1. Release the six latches behind the front bezel.
2. Remove the bezel by following the instruction below.

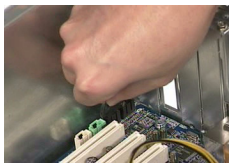


Removing the Cables

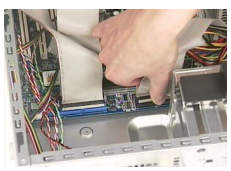
1. Disconnect the Aux-In cable.



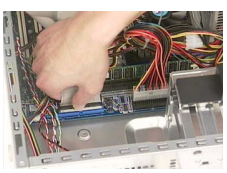
2. Disconnect the CD-In cable.

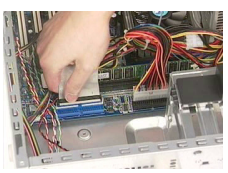


3. Disconnect the floppy cable.



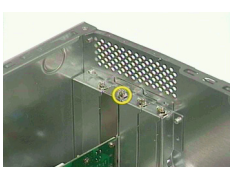
4. Disconnect the IDE1 and IDE2 cable.

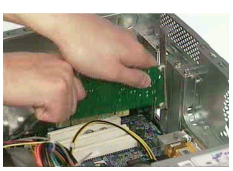




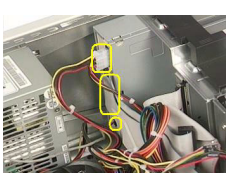
Removing the Modem card, CD-ROM, Floppy and HDD

1. Detach the modem card.

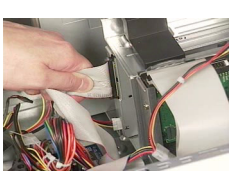




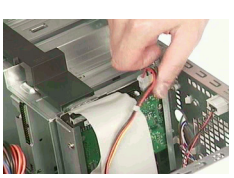
2. Disconnect the CD-ROM power, IDE and CD-In cables.

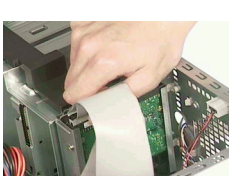


3. Disconnect the floppy cable and power cable.

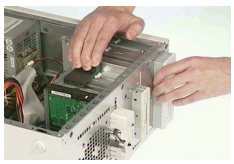


4. Disconnect the HDD power cable and IDE cable.

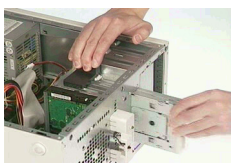




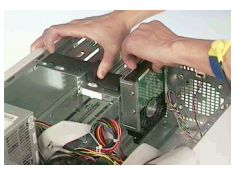
5. Press the latch and remove the CD-ROM drive.



6. Press the latch and remove the floppy drive.



7. Press the latch again to release the hard disk module.

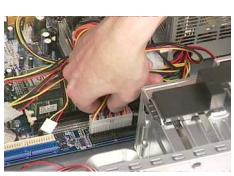


8. Detach the HDD from the bracket.

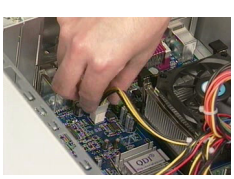


Removing the Power Supply

1. Remove the main ATX power connector as shown here.



2. Remove the Pentium 4(ATX-12V) power connector as shown here.

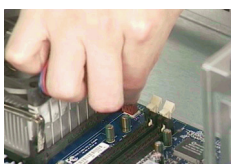


3. Remove the four screws as shown here.

4. Remove the power supply.

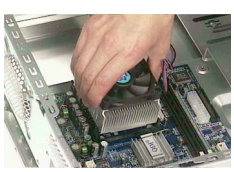
Removing the Heatsink and the CPU

1. Disconnect the Pentium 4 CPU power cable.

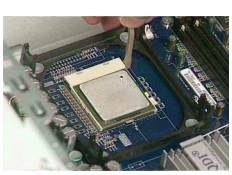


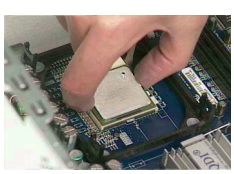
2. Release the two heatsink latches.

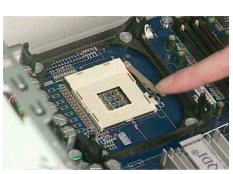
3. Remove the heatsink module.



4. Remove the CPU by following the instructions here.

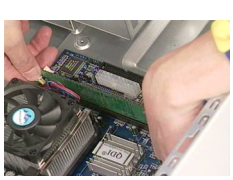


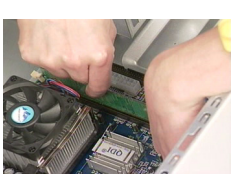




Removing the Memory

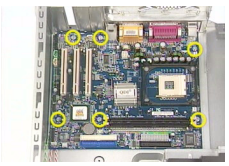
1. Pop out the memory and remove it as shown here.



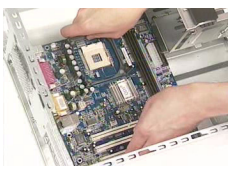


Removing the Mainboard

1. Remove the six screw as shown here.

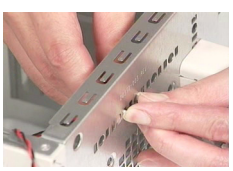


2. Remove the motherboard as shown here.



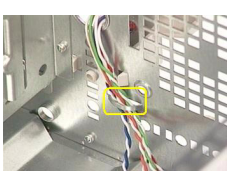
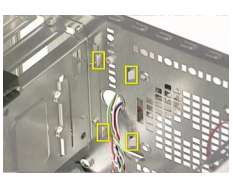
Removing the Power Button

1. Remove the power button as shown here.



Removing the LED Module

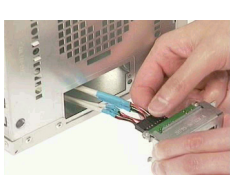
1. Remove the LED module by following the instructions here.


Removing the Daughter Board

1. Remove the screw as shown here.

2. Detach the USB cable and audio cable from the daughter board.

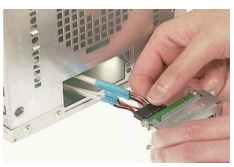



Standard Reassembly Procedure

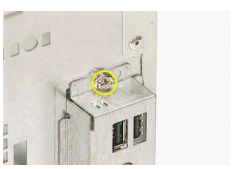
This section tells you how to reassemble the system when you need to perform system service. Please also refer to the assembly video, if available.

Installing the Daughter Board

1. Connect the audio cable and USB cables to the daughter board.

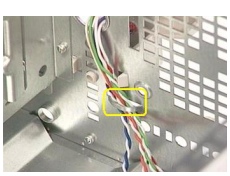
2. Fasten the daughter board with one screw as shown here.



Installing the LED Module

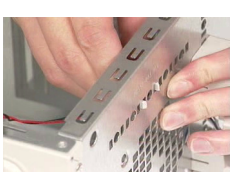
1. Install the LED module by following the instructions here.





Installing the Power Button

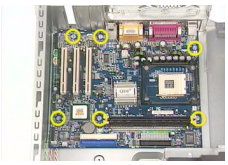
1. Attach the power button as shown here.



Installing the Mainboard

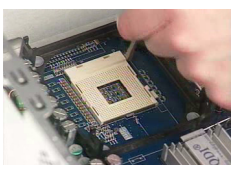
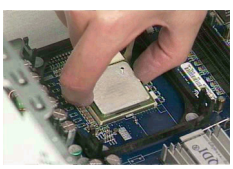
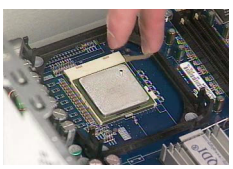
1. Put the motherboard to the original position as shown here.

2. Secure the motherboard with the six screw as shown here.

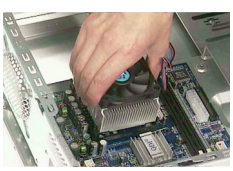


Installing the Heatsink and the CPU

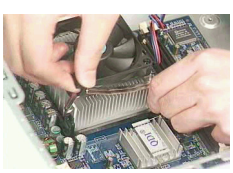
1. Place the CPU to the CPU socket by following the instructions here.

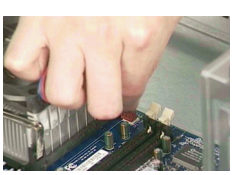
2. Place the heatsink module.



3. Secure the heatsink with the two heatsink latches.

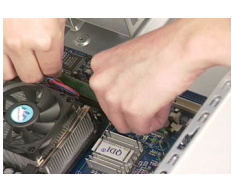


4. Connect the Pentium 4 CPU power cable.



Installing the Memory

1. Insert the memory to the DIMM slot as shown here.

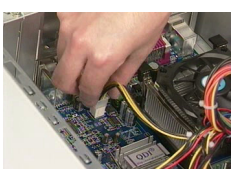


Installing the Power Supply

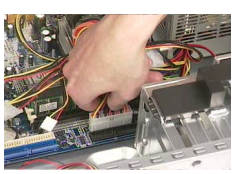
1. Place the power supply to the original position as shown here.

2. Secure the power supply with the four screws as shown here.

3. Connect the Pentium 4(ATX-12V) power connector to the motherboard as shown here.



4. Connect the main ATX power connector to the motherboard as shown here.



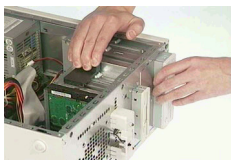
Installing the Modem card, CD-ROM, Floppy and HDD

1. Insert the HDD to the bracket by following the instructions here.

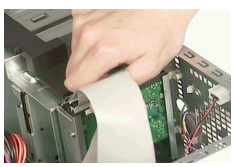
2. Place the HDD module back to the original position.

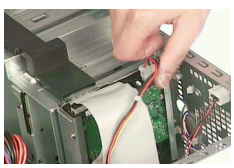
3. Place the floppy drive back to the original position.

4. Place the CD-ROM drive back to the original position.

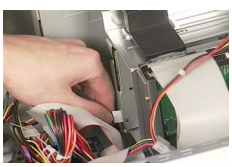


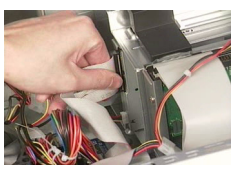
5. Connect the HDD power cable and IDE cable.



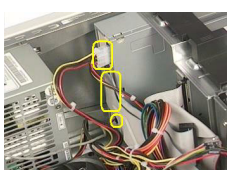


6. Connect the floppy cable and power cable.

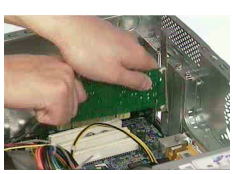


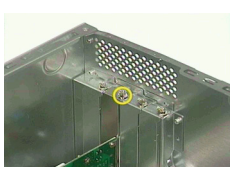


7. Connect the CD-ROM power, IDE and CD-In cables.



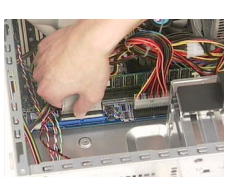
8. Place the modem card back to one PCI slot. Then secure the modem card with the screw.

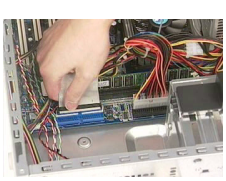




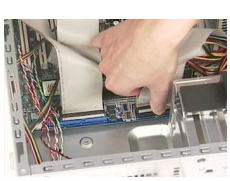
Installing the Cables

1. Connect the IDE1 and IDE2 cable to the motherboard.

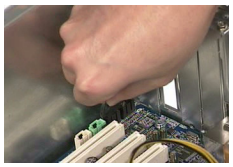




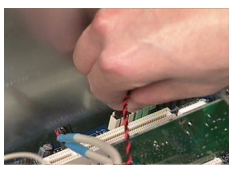
2. Connect the floppy cable to the motherboard.



3. Connect the CD-In cable to the motherboard.



4. Connect the Aux-In cable to the motherboard.



Installing the Front Panel

1. Place the front bezel back to the original position.

Closing the System

1. Place the side door back to the original position.

2. Secure the side door with the two screws as shown here.

Troubleshooting

This chapter provides troubleshooting information for the AcerT310/AcerPower F1:

- Power-On Self-Test (POST)
- Index of Error Messages
- Index of Error Codes and Error Beeps
- Index of Error Symptoms
- Undetermined Problems

Power-On Self-Test (POST)

Each time you turn on the system, the Power-on Self Test (POST) is initiated. Several items are tested during POST, but is for the most part transparent to the user.

The Power-On Self Test (POST) is a BIOS procedure that boots the system, initializes and diagnoses the system components, and controls the operation of the power-on password option. If POST discovers errors in system operations at power-on, it displays error messages on screen, generates a check point code at port 80h or even halts the system if the error is fatal.

The main components on the main board that must be diagnosed and/or initialized by POST to ensure system functionality are as follows:

- Microprocessor with built-in numeric co-processor and cache memory subsystem
- Direct Memory Access (DMA) controller
- Interrupt system
- Three programmable timers
- ROM subsystem
- RAM subsystem
- RTC RAM subsystem and real time clock/calendar with battery backup
- Onboard serial interface controller
- Onboard parallel interface controller
- Embedded hard disk interface and one diskette drive interface
- Keyboard and auxiliary device controllers
- I/O ports
  - PS/2-compatible mouse port
  - PS/2-compatible keyboard port
- Serial ports
- Parallel ports
- USB port

POST Check Points

When POST executes a task, it uses a series of preset numbers called check point to be latched at port 80h, indicating the stages it is currently running. This latch can be read and shown on a debug board.

The following table describes the Acer common tasks carried out by POST. A unique check point number represents each task.

Checkpoint	*Description*
CFh	Test CMOS R/W functionality
C0h	Early chipset initialization: • Disable shadow RAM • Disable L2 Cache (socket 7 or below) • Program basic chipset registers
C1h	Detect memory • Auto-detection of DRAM size, type and ECC. • Auto-detection of L2 cache (socket 7 or below)
C3h	Expand compressed BIOS code to DRAM
C5h	Call chipset hook to copy BIOS back to E000 & F000 shadow RAM
0h1	Expand the Xgroup codes locating in physical address 1000:0
02h	Reserved
03h	Initial Superio_Early_Init switch
04h	Reserved
05h	1. Blank out screen 2. Clear CMOS error flag
06h	Reserved
07h	1. Clear 8042 interface 2. Initialize 8042 self-test
08h	1. Test special keyboard controller for Winbond 977 series Super I/O chips 2. Enable keyboard interface
09h	Reserved
0Ah	1. Disable PS/2 mouse interface (optional) 2. Auto detect ports for keyboard & mouse followed by a port & interface swap (optional) 3. Reset keyboard for Winbond 977 series Super I/O chips
0Bh	Reserved
0Ch	Reserved
0Dh	Reserved
0Eh	Test F000h segment shadow to see whether it is R/W-able or not. If test fails. keep beeping the speaker.
0Fh	Reserved
10h	Auto detect flash type to load appropriate flash R/W codes into the run time area in F000 for ESCD & DMI support.
11h	Reserved

Checkpoint	*Description*
12h	Use walking 1's algorithm to check out interface in CMOS circuitry. Also set real-time clock power status, and then check for override.
13h	Reserved
14h	Program chipset default values into chipset. Chipset default values are MODBINable by OEM customers.
15h	Reserved
16h	Initial onboard clock generator if Early_Init_Onboard_Generator is defined. See also POST 26h.
17h	Reserved
18h	Detect CPU information including brand, SMI type (Cyrix or Intel) and CPU level (586 or 686).
19h	Reserved
1Ah	Reserved
1Bh	Initial interrupts vector table. If no special specified, all H/W interrupts are directed to SPURIOUS_INT_HDLR & S/W interrupts to SPURIOUS_soft_HDLR.
1Ch	Reserved
1Dh	Initial EARLY_PM_INIT switch
1Eh	Reserved
1Fh	Load keyboard matrix (notebook platform)
20h	Reserved
21h	HPM Initialization (notebook platform)
22h	Reserved
23h	1. Check validity of RTC value: e.g. a value of 5Ah is an invalid value for RTC minute. 2. Load CMOS settings into BIOS stack. If Smos checksum fails, use default value instead.
24h	Prepare BIOS resource map for PCI & PnP use. If ESCD is valid, take into consideration of the ESCD's legacy information.
25h	Early PCI Initialization: • Enumerate PCI bus number • Assign memory & I/O resource • Search for a valid VGA device & VGA BIOS, and put it into C000:0
26h	1. If Early_Init_Onboard_Generator is not defined Onboard clock generator initialization. Disable respective clock resource to empty PCI & DIMM slots. 2. Init onboard PWM 3. Init onboard H/W monitor devices
27h	Initialize INT 09 buffer
28h	Reserved
29h	1. Program CPU internal MTRR (P6 & PII) for 0-640K memory address. 2. Initialize the APIC for Pentium class CPU 3. Program early chipset according to CMOS setup. Example: onboard IDE controller. 4. Measure CPU speed.

Checkpoint	*Description*
2Ah	Reserved
2Bh	Invoke Video BIOS
2Ch	Reserved
2Dh	1. Initialize double-byte language font (Optional) 2. Put information on screen display, including Award title, CPU type, CPU speed, full screen logo.
2Eh	Reserved
2Fh	Rederved
30h	Reserved
31h	Reserved
32h	Reserved
33h	Reset keyboard if Early_Reset_KB is defined e.g. Winbond 977 series Super I/O chips. See also POST 63h
34h	Reserved
35h	Test DMA Channel 0
36h	Reserved
37h	Test DMA Channel 1
38h	Reserved
39h	Test DMA page registers
3Ah	Reserved
3Bh	Reserved
3Ch	Test 8254
3Dh	Reserved
3Eh	Test 8259 interrupt mask bits for channel 1
3Fh	Reserved
40h	Test 8259 interrupt mask bits for channel 2
41h	Reserved
42h	Reserved
43h	Test 8259 functionality
44h	Reserved
45h	Reserved
46h	Reserved
47h	Initialize EISA slot
48h	Reserved
49h	1. Calculate total memory by testing the last double word of each 64K page. 2. Program write allocation for AMD K5 CPU.
4Ah	Reserved
4Bh	Reserved
4Ch	Reserved
4Dh	Reserved

Checkpoint	Description
4Eh	1. Program MTRR of M1 CPU 2. Initialize L2 cache for P6 class CPU & program CPU with proper cacheable range. 3. Initialize the APIC for P6 class CPU. 4. On MP platform, adjust the cacheable range to smaller one in case the cacheable ranges between each CPU are not identical.
4Fh	Reserved
50h	Initialize USB Keyboard & Mouse
51h	Reserved
52h	Test all memory (clear all extended memory to 0)
53h	Clear password according to H/W jumper (Optional)
54h	Reserved
55h	Display number of processors (multi-processor platform)
56h	Reserved
57h	1. Display PnP logo 2. Early ISA PnP initialization - Assign CSN to every ISA PnP device
58h	Reserved
59h	Initialize the combined Trend Anti-Virus code
5Ah	Reserved
5Bh	(Optional Feature) Show message for entering AWDFLASH.EXE from FDD (optional)
5Ch	Reserved
5Dh	1. Initialize Init_Onboard_Super_IO 2. Initialize Init_Onboard_AUDIO
5Eh	Reserved
5Fh	Reserved
60h	Okay to enter Setup utility; i.e. not until this POST stage can users enter the CMOS setup utility.
61h	Reserved
62h	Reserved
63h	Reset keyboard if Early_Reset_KB is not defined.
64h	Reserved
65h	Initialize PS/2 Mouse
66h	Reserved
67h	Prepare memory size information for function call: INT 15h ax=E820h
68h	Reserved
69h	Turn on L2 cache
6Ah	Reserved
6Bh	Program chipset registers according to items described in Setup & Auto-configuration table
6Ch	Reserved

Checkpoint	Description
6Dh	1. Assign resources to all ISA PnP devices. 2. Auto assign ports to onboard COM ports if the corresponding item in Setup is set to “Auto”.
6Eh	Reserved
6Fh	1. Initialize floppy controller 2. Set up floppy related fields in 40:hardware
70h	Reserved
71h	Reserved
72h	Reserved
73h	Reserved
74h	Reserved
75h	Detech &install all IDE device: HDD, LS120, ZIP, CDROM...
76h	(Optional feature) Enter AWDFLASH.EXE if: - AWDFLASH.EXE is found in floppy drive. - ALT+F2 is prrssed.
77h	Detect serial ports & parallel ports
78h	Reserved
79h	Reserved
7Ah	Detect & install co-processor
7Bh	Reserved
7Ch	Init HDD write protect
7Dh	Reserved
7Eh	Reserved
7Fh	Switch back to text mode if full screen logo is supported. - If errors occur, report errors & wait for keys - If no errors occur or F1 key is pressed to continue: Clear EPA or customization logo.
80h	Reserved
81h	Reserved
82h	1. Call chipset power management hook. 2. Recover the text fond used by EPA logo (not for full screen logo). 3. If password is set, ask for password.
83h	Save all data in stack back to CMOS
84h	Initialize ISA PnP boot devices
85h	1. USB final initialization 2. Switch screen back to text mode
86h	Reserved
87h	NET PC: Build SYSID structure
88h	Reserved
89h	1. Assign IRQs to PCI devices. 2. Set up ACPI table at top of the memory.
8Ah	Reserved

Checkpoint	*Description*
8Bh	1. Invoke all ISA adapter ROMs 2. Invoke all PCI ROMs (except VGA)
8Ch	Reserved
8Dh	1. Enable/Disable Parity Check according to CMOS setup. 2. APM Initialization
8Eh	Reserved
8Fh	Clear noise if IRQs
90h	Reserved
91h	Reserved
92h	Reserved
93h	Read HDD boot sector information for Trend Anti-Virus code
94h	1. Enable L2 cache 2. Program Daylight Saving 3. Program boot up speed 4. Chipset final initialization 5. Power management final initialization 6. Clear screen & dispaly summary table 7. Program K6 write allocation 8. Program P6 class write combining
95h	Update keyboard LED & typematic rate
96h	1. Build MP table 2. Build & update ESCD 3. Set CMOS century to 20h or 19h 4. Load CMOS time into DOS timer tick 5. Build MSIRQ routing table
FFh	Boot attempt (INT 19h)

POST Error Messages List

If you cannot run the diagnostics program tests but did receive a POST error message, use “POST Error Messages List” to diagnose system problems. If you did not receive any error message, look for a description of your error symptoms in “Error Sympton List”.

NOTE: When you have deemed it necessary to replace an FRU, and have done so, you must run a total system check to ensure that no other activity has been affected by the change. This system check can be done through the diagnostics program.

NOTE: Check all power supply voltages, switch, and jumper settings before you replace the main board. Also check the power supply voltages if you have a “system no-power” condition.

NOTE: To diagnose a problem, first find the BIOS error messages in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/FRU listed in right column is the most likely cause.

BIOS Messages	Action/FRU
I/O Parity Error	1. System board
CPU Clock Mismatch	1. Enter BIOS Setup and load the default settings. 2. Ensure BIOS setting for processor is set correctly.
Real Time Clock Error CMOS Battery Bad CMOS Checksum Error	1. Enter BIOS Setup and load the default settings. 2. RTC Battery. 3. System Board.
Equipment Configuration Error	1. Ensure the system configuration set in BIOS Setup is correct. 2. Enter BIOS Setup and load the default settings. 3. RTC battery. 4. System board.
System Management Memory Bad Memory Error at MMMM:SSSS:OOOOh	1. Insert the memory modules in the DIMM sockets properly, then reboot the system. 2. Memory module. 3. System board.
RAM Parity Error	1. Enter BIOS Setup to disable parity check. 2. Memory module 3. System board
PS/2 Keyboard Error or Keyboard Not Connected PS/2 Keyboard Interface Error PS/2 Keyboard Locked	1. Re-connect PS/2 keyboard and mouse. 2. Enter BIOS Setup and load the default settings. 3. PS/2 keyboard 4. PS/2 mouse 5. System board
Onboard xxx... Conflict(s)	1. Enter BIOS Setup and load the default settings. 2. Remove all adapter cards that are NOT factory-installed, then reboot the system.
Floppy Disk Controller Error Floppy Drive A Error Floppy Drive B Error	1. Diskette drive cable/connection. 2. Diskette drive. 3. System board
On Board Parallel Port Conflict(s) On Board Serial Port 1 Conflict(s) On Board Serial Port 2 Conflict(s)	1. Enter BIOS Setup and load the default settings. 2. Remove all adapter cards that are NOT factory-installed, then reboot the system.

BIOS Messages	Action/FRU
Floppy Drive(s) Write Protected Hard Disk Drive(s) Write Protected	1. Ensure that the diskette drive is not set to [Write Protected] in the Security Options in BIOS Setup. 2. Load default settings in Setup.
IDE Drive 0 Error IDE Drive 1 Error IDE Drive 2 Error IDE Drive 3 Error	1. Enter BIOS Setup and load the default settings. 2. Check IDE drive jumper. 3. IDE hard disk drive power. 4. IDE hard disk drive cable/connection. 5. IDE hard disk drive.
IRQ Setting Error Expansion ROM Allocation Fail I/O Resource Conflict(s) Memory Resource Conflict(s)	1. Load default settings in Setup. 2. Enter BIOS Setup and set the **Reset Resource Assignments** of the **PnP/PCI Options** to Yes, then reboot the system. 3. Remove all adapter cards that are NOT factory-installed, then reboot the system
PCI Device Error	1. Load default settings in Setup. 2. Enter BIOS Setup and set the **Reset Resource Assignments** of the **PnP/PCI Options** to Yes, then reboot the system. 3. Remove all adapter cards that are NOT factory-installed, then reboot the system.
PS/2 Pointing Device Interface Error PS/2 Pointing Device Error	1. Re-connect PS/2 keyboard and mouse. 2. Enter BIOS Setup and load the default settings. 3. PS/2 mouse 4. PS/2 keyboard 5. System board
DMI Table Was Destroyed	1. Flash BIOS
Press “DEL” key to enter Setup or F1 key to continue	1. Press DEL to enter Setup and reconfigure the system.
Press ESC to turn off NMI, or any key to reboot	1. Press ESC to reject NMI error or press any other key to reboot the system.
Insert system diskette and press ENTER key to reboot	1. Insert a bootable disk into the floppy disk drive or remove this disk if a hard disk is installed.

Error Symptoms List

NOTE: To diagnose a problem, first find the error symptom in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/ FRU listed in right column is the most likely cause

.

Error Symptom	Action/FRU
Processor / Processor Fan	
NOTE: Normally, the processor fan should be operative, and the processor clock setting should be exactly set to match its speed requirement before diagnosing any processor problems.	
Processor fan does not run but power supply fan runs.	1. Ensure the system is not in power saving mode. See “Power Management” in chapter 2. 2. With the system power on, measure the voltage of processor fan connector. Its reading should be +12Vdc. 3. System board.
Processor test failed.	1. Processor 2. System board
System Board and Memory	
NOTE: Ensure the memory modules are installed properly and the contact leads are clean before diagnosing any system problems.	
Memory test failed.	1. See "Memory" 2. System board
Incorrect memory size shown or repeated during POST.	1. Insert the memory modules in the DIMM sockets properly, then reboot the system. 2. Memory module. 3. System board.
System works but fails to enter power saving mode when the `Power Management Mode` is set to `Enabled`, and power saving timer set in BIOS has elapsed.	1. Enter BIOS Setup and load default settings. In Windows 98, check settings in Power Management Property of Control Panel. 2. Reload software from Recovery CD.
System hangs before system boot.	1. See "Index of Symptoms" 2. See "Undetermined Problems"
System hangs after system boot.	1. Execute a system test and set it to stop at “Halt on Error” to see the potential cause of the problem. 2. See “Undetermined Problems”.
Blinking cursor only; system does not work.	1. Diskette/IDE drive connection/cables 2. Diskette/IDE disk drives 3. See “Undetermined Problems”. 4. System board
Diskette Drive	
NOTE: Ensure the diskette drive is configured correctly in BIOS Setup and its read/write head is clean before diagnosing any diskette drive problems.	
Media and drive are mismatched.	1. Ensure the diskette drive is configured correctly in the Disk Drives of BIOS Setup. 2. Ensure the diskette drive is correctly formatted. 3. Diskette drive connection/cable 4. Diskette drive 5. System board

Error Symptom	Action/FRU
Diskette drive does not work.	1. Ensure the diskette drive is not set to `None` in the Disk Drives of BIOS Setup. 2. Diskette drive power 3. Diskette drive connection/cable 4. Diskette drive 5. System board
Diskette drive read/write error.	1. Diskette. 2. Ensure the diskette drive is not set to `Write protect` in the Security Options of BIOS Setup. 3. Diskette drive cable. 4. Diskette drive. 5. System board.
Diskette drive LED comes on for more than 2 minutes when reading data.	1. Diskette 2. Diskette drive connection/cable 3. Diskette drive 4. System board
Diskette drive LED fails to light, and the drive is unable to access for more than 2 minutes.	1. Diskette 2. Diskette drive power 3. Diskette drive connection/cable 4. Diskette drive 5. System board
Diskette drive test failed.	1. Diskette 2. Diskette drive 3. Diskette drive cable 4. System board
Hard Disk Drive	
NOTE: Ensure hard disk drive is configured correctly in BIOS Setup, cable/jumper are set correctly before diagnosing any hard disk drive problems.	
Hard disk drive test failed.	1. Enter BIOS Setup and Load default settings. 2. Hard disk drive cable. 3. Hard disk drive. 4. System board.
Hard disk drive cannot format completely.	1. Enter BIOS Setup and Load default settings. 2. Hard disk drive cable. 3. Hard disk drive. 4. System board.
Hard disk drive has write error.	1. Enter BIOS Setup and Load default settings. 2. Hard disk drive.
Hard disk drive LED fails to light, but system operates normally.	1. With the system power on, measure the voltage of hard disk LED connector. 2. Hard drive LED cable.
CD/DVD-ROM Drive	
NOTE: Ensure CD/DVD-ROM drive is configured correctly in BIOS Setup, cable/jumper are set correctly and its laser beam is clean before diagnosing any CD/DVD-ROM drive problems.	
CD/DVD-ROM drive LED doesn't come on but works normally.	1. CD/DVD-ROM drive

Error Symptom	Action/FRU
CD/DVD-ROM drive LED flashes for more than 30 seconds before LED shutting off. Software asks to reinstall disc. Software displays a reading CD/DVD error.	1. CD/DVD-ROM may have dirt or foreign material on it. Check with a known good disc. 2. CD/DVD-ROM is not inserted properly. 3. CD/DVD-ROM is damaged.
CD/DVD-ROM drive cannot load or eject when the system is turned on and its eject button is pressed and held.	1. Disconnect all cables from CD/DVD-ROM drive except power cable, then press eject button to try to unload the disk. 2. CD/DVD-ROM drive power. 3. CD/DVD-ROM drive
CD/DVD-ROM drive does not read and there are no messages are displayed.	1. CD may have dirt or foreign material on it. Check with a known good disc. 2. Ensure the CD/DVD-ROM driver is installed properly. 3. CD/DVD-ROM drive.
CD/DVD-ROM drive can play audio CD but no sound output.	1. Ensure the headphone jack of the CD/DVD-ROM has an output. 2. Turn up the sound volume. 3. Speaker power/connection/cable. 4. CD/DVD-ROM drive.
Real-Time Clock	
Real-time clock is inaccurate.	1. Ensure the information in the `Date and Time` of BIOS Setup is set correctly. 2. RTC battery. 3. System board
Audio	
Audio software program invokes but no sound comes from speakers.	1. Speaker power/connection/cable.
Modem	
Modem ring cannot wake up system from suspend mode.	1. Ensure the `Modem Ring Indicator` in BIOS Setup or `Power Management` is set to `Enabled`. 2. If PCI modem card is used, reinsert the modem card to PCI slot firmly or replace the modem card. 3. If ISA modem card is used, ensure the modem ring-in cable from the modem card to system board is connected properly. 4. In Win 98, ensure the telephone application is configured correctly for your modem and set to receive messages and/or fax.
Data/fax modem software program invokes but cannot receive/send data/ fax	1. Ensure the modem card is installed properly.
Fax/voice modem software program invokes but has no sound output. (Data files are received normally; voice from modem cannot be produced, but system sound feature works normally.)	1. Ensure the modem voice-in cable from modem adapter card to system board
Video and Monitor	
Video memory test failed. Video adapter failed.	1. Remove all non-factory-installed cards. 2. Load default settings (if screen is readable). 3. System board

Error Symptom	Action/FRU
Display problem: - Incorrect colors No high intensity Missing, broken, or incorrect characters Blank monitor(dark) Blank monitor(bright) Distorted image Unreadable monitor Other monitor problems	1. Monitor signal connection/cable. 2. Monitor 3. Video adapter card 4. System board
Display changing colors.	1. Monitor signal connection/cable 2. Monitor 3. System board
Display problem not listed above (including blank or illegible monitor).	1. “Monitor". 2. Load default settings (if screen is readable). 3. System board

Error Symptom	Action/FRU
Parallel/Serial Ports	
Execute “Load BIOS Default Settings” in BIOS Setup to confirm ports presence before diagnosing any parallel/serial ports problems.	
Serial or parallel port loop-back test failed.	1. Make sure that the LPT# or COM# you test is the same as the setting in BIOS Setup. 2. Loop-back. 3. System board.
Printing failed.	1. Ensure the printer driver is properly installed. Refer to the printer service manual. 2. Printer. 3. Printer cable. 4. System board.
Printer problems.	1. Refer to the service manual for the printer.
Keyboard	
Some or all keys on keyboard do not work.	1. Keyboard
Power Supply	
Pressing power switch does not turn off system. (Only unplugging the power cord from electrical outlet can turn off the system.)	1. Ensure the `Power Switch < 4 sec.` in BIOS Setup of `Power Management` is not set to `Suspend`. 2. Power switch cable assembly
Pressing power switch does not turn on the system.	1. Ensure the power override switch (situated at the back of the machine, just above the connector for the power cable) is not set to OFF. 2. Power switch cable assembly.
Executing software shutdown from Windows98 Start menu does not turn off the system. (Only pressing power switch can turn off the system).	1. Load default settings. 2. Reload software from Recovery CD.
No system power, or power supply fan is not running.	1. Power Supply 2. System Board
Other Problems	
Any other problems.	1. Undetermined Problems

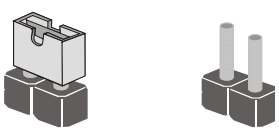
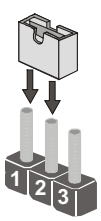
Jumper and Connector Information

Checking Jumper Settings

This section explains how to set jumpers for correct configuration of the mainboard.

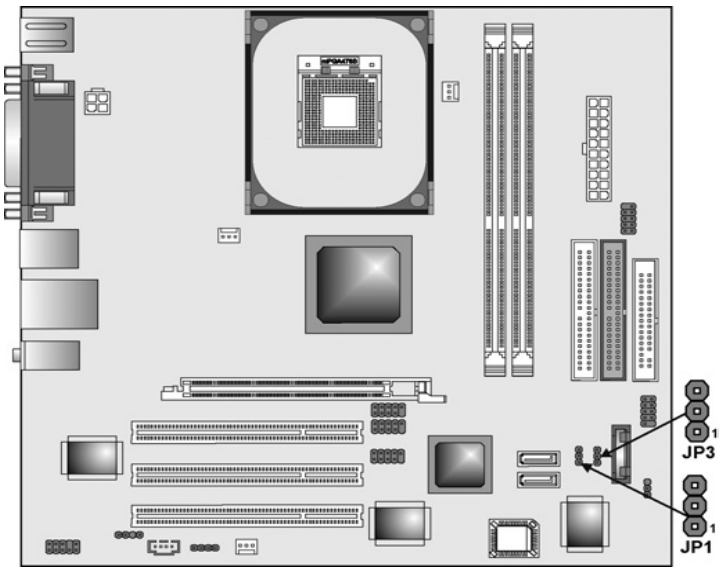
Setting Jumpers

Use the mainboard jumpers to set system configuration options. Jumpers with more than one pir are numbered. When setting the jumpers, ensure that the jumper caps are placed on the correct pins.

Jumper	Description
 Short Open	The illustrations below show a 2-pin jumper. When the jumper cap is placed on both pins, the jumper is SHORT. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is OPEN.
	This illustration shows a 3-pin jumper. Pins1 and 2 are SHORT.

Checking Jumper Settings

The following illustration shows the location of the mainboard jumpers. Pin 1 is labeled.



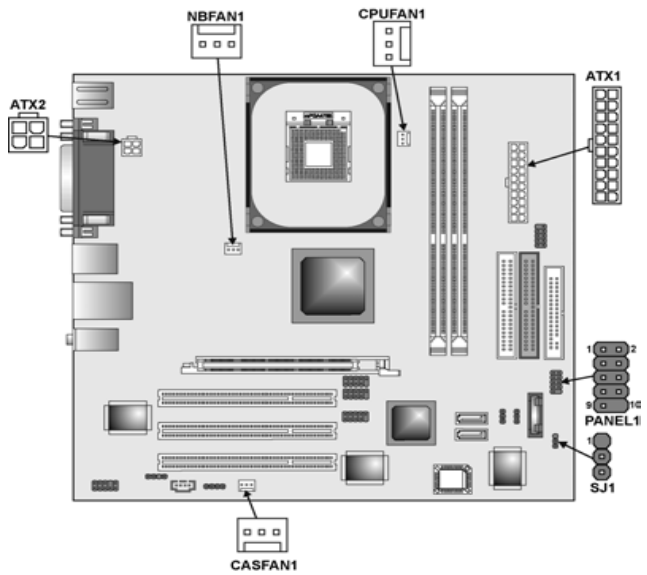
Jumper	Type	Description	Setting (default)	
JP1	3-pin	Clear CMOS	1-2: Normal 2-3: Clear CMOS	
JP3	2-pin	BIOS Protect	1-2: Write Enable 2-3: Write Disable	

Jumper	Description
JP1 : Clear CMOS Jumper	This jumper is to clear the contents of CMOS memory. You may need to clear the CMOS memory if the settings in the Setup Utility are incorrect that prevents your mainboard from operating. To clear the CMOS memory, disconnect all the power cables from the mainboard and then move the jumper cap into the CLEAR setting for a few seconds. This jumper enables you to reset BIOS.
JP3: BIOS Protect Jumper	This jumper enables you to prevent the BIOS from being updated (flashed). Set the jumper to disabled if you are going to update your BIOS. After updating the BIOS, return it to the default setting (Enabled).

Connecting Case Components

After you have installed the mainboard into a case, you can begin connecting the mainboard components.

Refer to the following:

Description	Connector
1. Connect the CPU cooling fan cable to **CPUFAN1**. 2. Connect the case cooling fan connector to **CASFAN1**. 3. Connect the Northbridge cooling fna to **NBFAN1**. 4. Connect the case LED cable to **SJ1**. Connect the case switches and indicator LEDs to the **PANEL1**. 5. Connect the standard power supply connector to ATX1. 6. Connect the Pentium 4 processor auxiliary case power supply connector to **ATX2**.	

ATX1: ATX 20-pin Power Connector

Pin	Signal Name	Pin	Signal Name
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS NO#
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	PWRGD	18	+5V
9	+5VSB	19	+5V
10	+12V	20	+5V

ATX2: ATX12V Power Connector

Pin	Signal Name
1	+12V
2	+12V
3	Ground
4	Ground

CPUFAN1/CASFAN1/NBFAN1: Fan Power Connectors

Pin	Signal Name	Function
1	GND	System Ground
2	+12V	Power +12V
3	Sense	Sensor

SJ1: Single Color LED Header

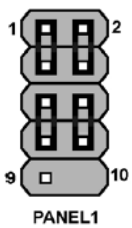
Pin	Signal Name	Function
1	ACPI LED	MSG LED(-) Green
2	ACPI LED	MSG LED(-) Green
3	SB5V	Power LED(+)

ACPI LED Function

Setting	Signal Name	Color
	S0	Light
	S1	Blinking
	S3	Blinking
	S4/S5	Dark

Front Panel Connector

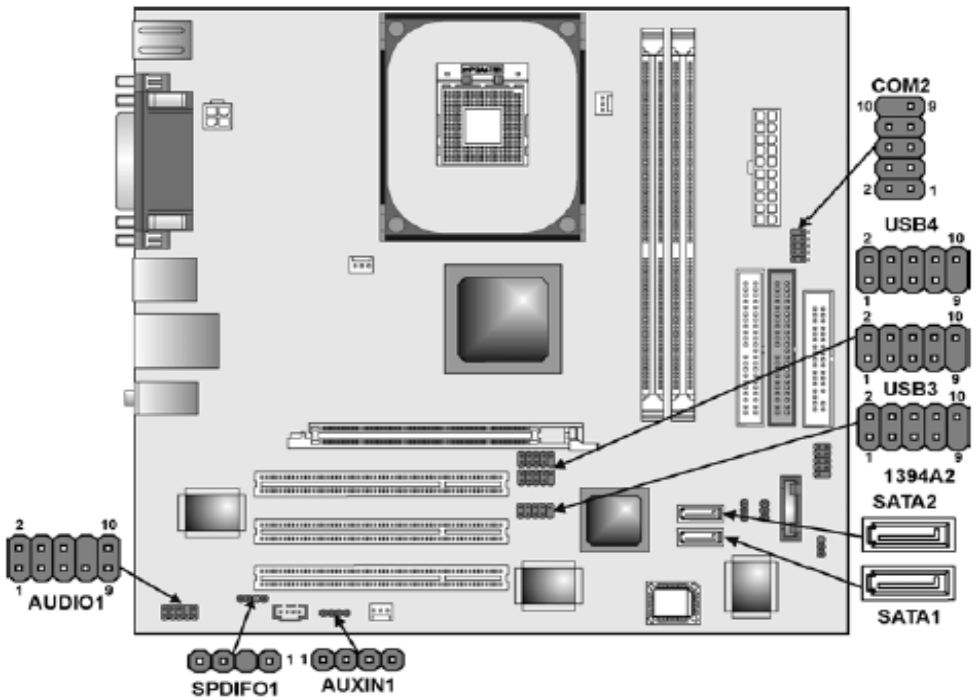
The front panel connect (PANEL 1) provides a standard set of switch and LED connectors commonly found on ATX or micro-ATX cases. Refer to the table below for information:

Setting	Pin	Signal	Function	Pin	Signal	Function
	1	HD_LED_P	Hard disk LED ([positive)	2	FP PWR/SLP	MSG LED(dual color or single color (+))
	3	HD_LED_N	Hard disk active LED (negative)	4	FP PWR/SLP	MSG LED(dual color or single color(-))
	5	RST_SW_N	Reset Switch	6	PWR_SW_P	Power Switch
	7	RST_SW_P	Reset Switch	8	PWR_SW_N	Power Switch
	9	RSVD	Reserved	10	NC	No Pin

Function	Description
Hard Disk Activity LED	Connecting pins 1 and 3 to a front panel mounted LED provides visual indication that data is being read from or written to the hard drive. For the LED to function properly, an IDE drive should be connected to the onboard IDE interface. The LED will also show activity for devices connected to the SCSI (hard drive activity LED) connector.
Power/Sleep/ Message Waiting LED	Connecting pis 2 and 4 to a signal- or dual-color, front panel mounted LED provides power on/off, sleep, and message waiting indication.
Reset Switch	Supporting the reset function requires connecting pins 5 and 7 to a momentary-contact switch that is normally open. When the switch is closed, the board resets and runs POST.
Power Switch	Supporting the power on/off function requires connecting pins 6 and 8 to a momentary-contact switch that is normally open. The switch should maintain contact for at least 50ms to signal the power supply to switch on or off. The time requirement is due to internal debounce circuitry. After receiving a power on/off signal, at lease two seconds elapses before the power supply recognizes another on/off signal.

Connecting Optional Devices

Refer to the following for information on connecting the mainboard's optional devices:



AUDIO1: Front Panel Audio Connector

This connector allows the user to install auxiliary front-oriented microphone and line-out ports for easier access.

Pin	Signal Name	Function
1	AUD_MIC	Front Panel Microphone input signal
2	AUD_GND	Ground used by Analog Audio Circuits
3	AUD_MIC_BIAS	Microphone Power
4	AUD_VCC	Filtered +5V used by Analog Audio Circuits
5	AUD_FPOUT_R	Right Channel Audio signal to Front Panel
6	AUD_RET_R	Right Channel Audio signal to Return from Front Panel
7	HP_ON	Reserved for future use to control Head-phone Amplifier
8	KEY	No Pin
9	AUD_FPOUT_L	Left Channel Audio signal to Front Panel
10	AUD_RET_L	Left Channel Audio Signal to Return from Front Panel

SPDIFO1: SPDIF out header (optional)

You can purchase an optional 24-bit digital audio extension bracket from a third-party vendor. You can use the audio RCA jacks to connect to digital audio devices. If your CD-ROM/DVD drive has digital audio output, you can connect it to the input pins of the SPDIF connector.

Pin	Singal Name	Function
1	SPDIF	SPDIF digital output
2	+5VA	5V analog power
3	NC	Not Connector
4	GND	Ground

AUXIN1:Auxiliary-in Header

This connector is an additional line-in audio connector. It allows you to attach a line-in cable when your rear line-in jack is set as line out port for 4-channel function.

Pin	Signal Name	Function
1	AUX_L	AUX in left channel
2	GND	Ground
3	GND	Ground
4	AUX_R	AUX in right channel

SATA1/SATA2: Serial ATA Headers

These connectors are use to support the new Serial ATA devices for the highest date transfer rates (150 MB/s), simpler disk drive cabling and easier PC assembly.It eliminates limitations of the current Parallel ATA interface. But maintains register compatibility and software compatibility with Parallel ATA.

Pin	Signal Name	Pin	Signal Name
1	GND	2	TX+
3	TX-	4	GND
5	RX-	6	RX+
7	GND	-	-

1394A2: IEEE 1394a Header

Use this header to connect to any IEEE 1394a interface.

Pin	Signal Name	Pin	Signal Name
1	TPA+	2	TPA-
3	GND	4	GND
5	TPB+	6	TPB-
7	Cable-Power	8	Cable-Power
9	NC	10	GND

USB3/USB4: Front Panel USB Connectors

The mainboard has two USB ports installed on the rear edge I/O port array. Additionally, some computer cases have USB ports at the front of the case. If you have this kind of case, use auxiliary USB connector to connect the front mounted ports to the mainboard.

Pin	Signal Name	Function
1	VREG_FP_USBPWR0	Front Panel USB Power
2	VREG_FP_USBPWR0	Front Panel USB Power
3	USB_FP_P0-	USB Port 0 Negative Signal
4	USB_FP_P1-	USB Port 1 Negative Signal
5	USB_FP_P0+	USB Port 0 Positive Signal
6	USB_FP_P1+	USB Port 1Positive Signal
7	GND	Ground
8	GND	Ground
9	KEY	No Pin
10	USB_FP_OC0	Overcurrent Signal

NOTE: Please make sure that the USB cable has the same pin assignement as indicated above. A different pin assignment may cause damage or system hang-up.

COM2: Onboard Serial Port Connector

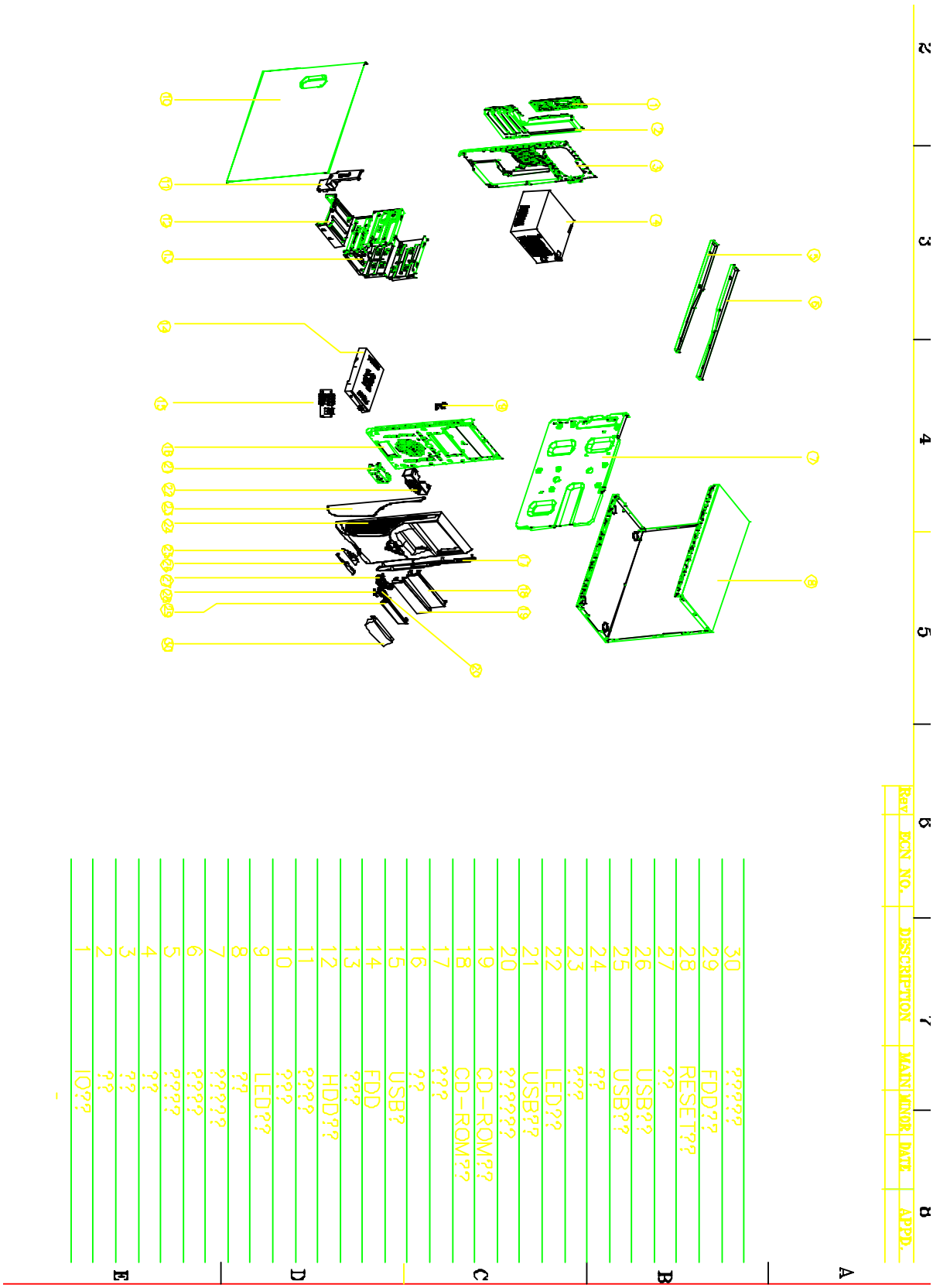
Connect a serial port extension bracket to this header to add a second serial port to your system.

Pin	Singal Name	Function
1	NDCDB	Data Carry Detect
2	NSINB	Serial Data In
3	NSOUTB	Serial Data Out
4	NDTRB	Data Terminal Ready
5	GND	Ground
6	NDSRB	Data Set Ready
7	NRTSB	Request to Send
8	NCTSB	Clear to Send
9	NRIB	Ring Indicator
10	Key	Key

FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AcerPower F1 / Aspire T310. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

AcerPower F1 / Aspire T310 Exploded Diagram

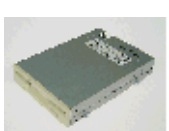


NOTE: Due to the Aspire T310 (new black bezel) is smiliar with AcerPower F1 (white bezel); meanwhile, you will see some parts which are the same.

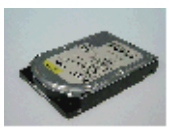
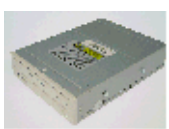
NOTE: Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel (http://aicsl.acer.com.tw/spl/, if you do not own a specific account, you can still access the system with guest; guest). For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how best to dispose it, or follow the rules set by your regional Acer office on how to return it.

AcerPower F1

Picture	Partname	Part No.
Memory		
	DDR266 256MB 0.14U 32MX8*8 NANYA NT256D64S88B0G-75B	KN.25603.012
	DDR266 512MB 0.14U 32MX8*16 NANYA NT512D64S8HB0G-75B	KN.51203.008
	DDR333 256MB INFENION	KN.25602.002
	DDR333 128MB 0.14U 16M*16*4 NANYA NT128D64SH4B1G-6K	KN.12803.005
	DDR333 256MB 0.14U 32M*8*8 NANYA NT256D64S88B1G-6K	KN.25603.008
	DDR333 512MB 0.14U 32M*8*16 NANYA NT512D64S8HB1G-6K	KN.51203.004
	DDR333 256MB MICRON MT8VDDT3264AG-335CA CL2.5	KN.25604.008
	DDR400 128MB INFINEON HYS64D16301GU-5-B	KN.12802.005
	DDR400 256MB INFINEON HYS64D32300GU-5-B	KN.25602.008
	DDR400 512MB INFINEON HYS64D64320GU-5-B	KN.51202.006
	DDR400 256MB NANYA NT256D64S88B1G-5T EA	KN.25603.011
	DDR400 512MB NANYA	TBD
CPU/PROCESSOR		
	CELERON 2.4GHZ/400FSB/128K	KC.DCD01.24A
	CELERON 2.6GHZ/400FSB/128K (MULTIPLE VID)	KC.DCD01.26A
	NORTHWOOD 2.6GHZ/128K/400FSB	KC.DPD01.26A
	NORTHWOOD 2.4GHZ/512K/533FSB	KC.DPD01.24B
	NORTHWOOD 2.8GHZ/512K/533FSB	KC.DPD01.28B
	NORTHWOOD 2.4GHZ/512K/800FSB	KC.DP001.24C
	NORTHWOOD 2.6GHZ/512K/800FSB	KC.DP001.26C
	NORTHWOOD 2.8GHZ/512K/800FSB	KC.DP001.28C
	NORTHWOOD 3.0GHZ/512K/800FSB	KC.DP001.30C
FDD/Floppy Disk Drive		
	FDD 1.44MB PANASONIC JU-256A048P WHITE	KF.25602.002

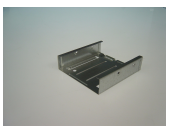
AcerPower F1

Picture	Partname	Part No.
HDD/Hard Disk Drive		
	HDDPROTEGE 40G 5400RPM, ATA-100 WD WD400EB-42CPF0 HDD 80G 5400RPM, ATA-100 WD WD800EB-00DJF0 HDD C2 40G 5400 RPM, ATA-100 SEAGATE ST340015A HDD U9 80G 5400 RPM, ATA-100 SEAGATE ST380012A HDD ALPINE 80G 7200RPM, ATA-100 SEAGATE ST380011A HDD ALPINE 120G 7200RPM, ATA-100 SEAGATE ST3120022A HDD XL40S 40G 7200RPM, ATA-100 WD 400BB-00DEA0 HDD XL80S 80G 7200RPM WD WD800BB-00DKA0 HDD XL80 120G 7200RPM WD 1200BB-00DWA0 HDD 40G 7200RPM, ATA-100 HITACHI HDS722540VLAT20 HDD 80G 7200RPM, ATA-100 HITACHI HDS722580VLAT20 HDD 120G 7200RPM, ATA-100 HITACHI HDS7225120VLAT20	KH.04008.004 KH.08008.004 KH.04001.002 KH.08001.002 KH.08001.001 KH.12001.001 KH.04008.002 KH.08008.003 KH.12008.001 KH.04007.007 KH.08007.005 KH.12007.003
CD-ROM/DVD-ROM/CD-RW		
	CD-ROM DRIVE 52X BTC F564E WHITE CD-ROM DRIVE 52X MSI MS-8152 WHITE CD-RW DRIVE 52X24X52X LITE-ON LTR-52246S WHITE DVD-ROM DRIVE 16X PIONEER DVD-121CHF WHITE DVD-ROM DRIVE 16X PIONEER DVD-121RD WHITE DVD-ROM DRIVE 16X LITI-ON XJ-HD166S WHITE DVD-ROM DRIVE 16X HLDS GCR-8162B WHITE COMBO DRIVE 48X HLDS GCC-4480B WHITE DVD DUAL DRIVE 4X NEC ND-1300A WHITE DVD DUAL DRIVE 4X PIONEER DVR-106RD WHITE SUPERMULTI PLUS 4X DVD HLDS GSA-4040B WHITE	KD.52X0A.002 KD.0520B.002 KR.52X01.001 KV.01605.002 KV.16X05.003 KV.16X04.002 TBD KO.48X0A.001 KU.0040B.001 KU.00405.002 KU.0040C.001
Cables		
	IDE HDD CABLE ATA66 40PIN	50.PSPVF.001
	IDE CD-ROM CABLE ATA66 40PIN	50.PSPVF.002
	IDE FDD CABLE 34PIN	50.PSPVF.003

AcerPower F1

Picture	Partname	Part No.
	AUDIO CABLE 8PIN 2CON	50.S03VF.001
	FRONT INTERNAL USB CABLE	50.S03VF.002
Main board		
	MB E61ML P4/661FX/964L/2DIMM/3PCI	MB.S0307.001
Boards/Cards		
	VGA CARD ATI RADEON 9200 (8X) 64MB DDR W/ TV OUT(NTSC), ATX BRACKET FIC VGA CARD ATI RADEON 9200 (8X) 64MB DDR W/ TV OUT(PAL), ATX BRACKET FIC VGA CARD ATI RADEON 9600 128MB DDR W/ TV OUT + DVI (PAL), ATX BRACKET FIC A96 VGA CARD ATI RADEON 9600 128MB DDR W/ TV + DVI OUT (NTSC), ATX BRACKET FIC A96 VGA CARD XABRE200 AGP 8X 32MB, ATX BRACKET	VG.A9207.001 VG.A9207.002 VG.A9607.001 VG.A9607.002 VG.20005.001
	MODEM CARD 56K F-1156I(+)/R12 ATX GVC-AAP MODEM CARD 56K F-1156I(+)/R12 PACIFIC ATX GVC-USA MODEM CARD 56K F-1156I(+)/R12 GVC-AUSTRALIA	FX.56I02.003 FX.56I02.001 FX.56102.005
	USB/ AUDIO DAUGHTER BOARD FOXCONN	55.PSPVF.001
Power Supply		
	POWER SUPPLY 230W W/O PFC FSP FSP200-ATV(A) POWER SUPPLY 230W W PFC FSP 200-ATV(A)(PF)	PY.23008.003 PY.23008.004
Case/Cover/Bracket Assembly		
	FRONT BEZEL W/ POWER BUTTON, 5.25" 3.5" EMPTY COVER, USB DOOR	60.P01VF.001
	POWER BUTTON	42.PSPVF.001
	SIDE DOOR	60.PSPVF.002
	CHASSIS W/ I/O BRACKET	60.P01VF.002
	I/O BRACKET	33.S03VF.001
	RETENTION MODULE	TBD
	LED MODULE	42.P01VF.001

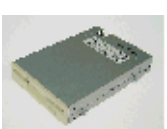
AcerPower F1

Picture	Partname	Part No.
	EMPTY COVER FOR 5.25" DEVICE	42.PSPVF.005
	HDD BRACKET	33.PSPVF.002
	FILLER COVER FOR 3.5" DEVICE	42.PSPVF.007
Peripheral		
	MOUSE PS2 2 BUTTON+WHEEL KYE POWER SCROLL PS2 WHITE	MS.PSE04.003
	OPTICAL MOUSE USB 2 BUTTON+WHEEL WHITE	MS.PSE04.001
	PS/2 KEYBOARD, KBP2971, US VER., 104KEYS	KB.KBP03.003
	PS/2 KEYBOARD, KBP2971, T.CHINESE VER., 104KEYS	KB.KBP03.010
	PS/2 KEYBOARD, KBP2971, ARABIC VER., 104KEYS	KB.KBP03.008
	PS/2 KEYBOARD, KBP2971, THAI VER., 104KEYS	KB.KBP03.005
	PS/2 KEYBOARD, KBP2971, SPANISH/US VER., 105KEYS	KB.KBP03.025
	PS/2 KEYBOARD, KBP2971, INT'L US VER., 104KEYS	KB.KBP03.006
	PS/2 KEYBOARD, KBP2971, CANADIAN/FRENCH VER, 105KEYS	KB.KBP03.028
	PS/2 KEYBOARD, KBP2971, BRAZILIAN VER., 107KEYS	KB.KBP03.032
	PS/2 KEYBOARD, KBP2971, UK VER., 104KEYS	KB.KBP03.027
	PS/2 KEYBOARD, KBP2971, FRENCH VER., 105KEYS	KB.KBP03.013
	PS/2 KEYBOARD, KBP2971, GERMANY VER., 105KEYS	KB.KBP03.014
	PS/2 KEYBOARD, KBP2971, ITALIAN VER., 105KEYS	KB.KBP03.012
	PS/2 KEYBOARD, KBP2971, SWISS VER., 105KEYS	KB.KBP03.002
	PS/2 KEYBOARD, KBP2971, SWEDEN VER., 105KEYS	KB.KBP03.029
	PS/2 KEYBOARD, KBP2971, BELGIUM VER., 105KEYS	KB.KBP03.009
	PS/2 KEYBOARD, KBP2971, DUTCH VER., 105KEYS	TBD
	PS/2 KEYBOARD, KBP2971, HOLLAND VER., 105KEYS	KB.KBP03.021
	PS/2 KEYBOARD, KBP2971, SPANISH VER., 105KEYS	KB.KBP03.025
	PS/2 KEYBOARD, KBP2971, PORTUGESE VER., 105KEYS	KB.KBP03.022
	PS/2 KEYBOARD, KBP2971, ICELAND VER., 105KEYS	KB.KBP03.019
	PS/2 KEYBOARD, KBP2971, NORWEGIAN VER., 105KEYS	KB.KBP03.020
	PS/2 KEYBOARD, KBP2971, HEBREW VER., 105KEYS	KB.KBP03.015
	PS/2 KEYBOARD, KBP2971, POLISH VER., 105KEYS	KB.KBP03.016
	PS/2 KEYBOARD, KBP2971, SLOVENIAN VER., 105KEYS	KB.KBP03.017
	PS/2 KEYBOARD, KBP2971, SLOVAKIAN VER., 105KEYS	KB.KBP03.018
	PS/2 KEYBOARD, KBP2971, TURKEY VER., 105KEYS	KB.KBP03.023
	PS/2 KEYBOARD, KBP2971, RUSSIAMVER., 104KEYS	KB.KBP03.024
	PS/2 KEYBOARD, KBP2971, HUNGARIA VER., 105KEYS	KB.KBP03.030
	PS/2 KEYBOARD, KBP2971, GREEK VER., 104KEYS	KB.KBP03.031

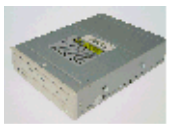
AcerPower F1

Picture	Partname	Part No.
	USB Keyboard, KU0355, US Ver., 104keys	KB.KUP03.002
	USB Keyboard, KU0355, T.Chinese Ver., 104keys	KB.KUP03.003
	USB Keyboard, KU0355, Arabic Ver., 104keys	KB.KUP03.008
	USB Keyboard, KU0355, Thai Ver., 104keys	KB.KUP03.005
	USB Keyboard, KU0355, Spanish/US Ver., 105keys	KB.KUP03.004
	USB Keyboard, KU0355, Int'l US Ver., 104keys	KB.KUP03.006
	USB Keyboard, KU0355, Canadian/French Ver., 105keys	KB.KUP03.028
	USB Keyboard, KU0355, Brazilian Ver., 107keys	KB.KUP03.032
	USB Keyboard, KU0355, UK Ver., 104keys	KB.KUP03.027
	USB Keyboard, KU0355, French Ver., 105keys	KB.KUP03.013
	USB Keyboard, KU0355, Germany Ver., 105keys	KB.KUP03.014
	USB Keyboard, KU0355, Italian Ver., 105keys	KB.KUP03.012
	USB Keyboard, KU0355, Swiss Ver., 105keys	KB.KUP03.001
	USB Keyboard, KU0355, Swedish Ver., 105keys	KB.KUP03.029
	USB Keyboard, KU0355, Belgium Ver., 105keys	KB.KUP03.009
	USB Keyboard, KU0355, Dutch Ver., 105keys	KB.KUP03.021
	USB Keyboard, KU0355, Holland Ver., 105keys	KB.KUP03.025
	USB Keyboard, KU0355, Spanish Ver., 105keys	KB.KUP03.022
	USB Keyboard, KU0355, Portugese Ver., 105keys	KB.KUP03.019
	USB Keyboard, KU0355, Iceland Ver., 105keys	KB.KUP03.020
	USB Keyboard, KU0355, Norwegian Ver., 105keys	KB.KUP03.015
	USB Keyboard, KU0355, Hebrew Ver., 105keys	KB.KUP03.016
	USB Keyboard, KU0355, Polish Ver., 105keys	KB.KUP03.017
	USB Keyboard, KU0355, Slovenian Ver., 105keys	KB.KUP03.018
	USB Keyboard, KU0355, Slovakian Ver., 105keys	KB.KUP03.023
	USB Keyboard, KU0355, Turkey Ver., 105keys	KB.KUP03.024
	USB Keyboard, KU0355, RussiamVer., 104keys	KB.KUP03.030
	USB Keyboard, KU0355, Hungaria Ver., 105keys	KB.KUP03.031
	USB Keyboard, KU0355, Greek Ver., 104keys	KB.KUP03.034
Speaker		
	SPEAKER USB 3" *2 NEOSONICA THYME510 WHITE	SP.51004.001
Fansink		
	CPU FANSINK P4 478 2.8G (AND BELOW) FOXCONN PKP111G01D32 W/ LATCH CPU FANSINK P4 478 FOR 3.0GHZ CPU (AND ABOVE) FOXCONN PKP159GB1D22 + 92X92X25	HI.1110B.001 TBD
Foot Stand		
	RUBBER FOOT	47.P01VF.001
Screws		
	M/B, USB BOARD SCREW	86.PSPVF.001
	FDD, CD-ROM SCREW	86.PSPVF.002
	CHASSIS SCREW	86.PSPVF.003
	SPS SCREW	86.PSPVF.004

Aspire T310

Picture	Partname	Part No.
Memory		
	DDR266 256MB 0.14U 32MX8*8 NANYA NT256D64S88B0G-75B	KN.25603.012
	DDR266 512MB 0.14U 32MX8*16 NANYA NT512D64S8HB0G-75B	KN.51203.008
	DDR333 256MB INFENION	KN.25602.002
	DDR333 128MB 0.14U 16M*16*4 NANYA NT128D64SH4B1G-6K	KN.12803.005
	DDR333 256MB 0.14U 32M*8*8 NANYA NT256D64S88B1G-6K	KN.25603.008
	DDR333 512MB 0.14U 32M*8*16 NANYA NT512D64S8HB1G-6K	KN.51203.004
	DDR333 256MB MICRON MT8VDDT3264AG-335CA CL2.5	KN.25604.008
	DDR400 128MB INFINEON HYS64D16301GU-5-B	KN.12802.005
	DDR400 256MB INFINEON HYS64D32300GU-5-B	KN.25602.008
	DDR400 512MB INFINEON HYS64D64320GU-5-B	KN.51202.006
	DDR400 256MB NANYA NT256D64S88B1G-5T EA	KN.25603.011
	DDR400 512MB NANYA	TBD
CPU/PROCESSOR		
	CELERON 2.4GHZ/400FSB/128K	KC.DCD01.24A
	CELERON 2.6GHZ/400FSB/128K (MULTIPLE VID)	KC.DCD01.26A
	NORTHWOOD 2.6GHZ/128K/400FSB	KC.DPD01.26A
	NORTHWOOD 2.4GHZ/512K/533FSB	KC.DPD01.24B
	NORTHWOOD 2.8GHZ/512K/533FSB	KC.DPD01.28B
	NORTHWOOD 2.4GHZ/512K/800FSB	KC.DP001.24C
	NORTHWOOD 2.6GHZ/512K/800FSB	KC.DP001.26C
	NORTHWOOD 2.8GHZ/512K/800FSB	KC.DP001.28C
	NORTHWOOD 3.0GHZ/512K/800FSB	KC.DP001.30C
FDD/Floppy Disk Drive		
	FDD 1.44MB PANASONIC JU-256A048P BLACK	TBD
HDD/Hard Disk Drive		
	HDDPROTEGE 40G 5400RPM, ATA-100 WD WD400EB-42CPF0	KH.04008.004
	HDD 80G 5400RPM, ATA-100 WD WD800EB-00DJF0	KH.08008.004
	HDD C2 40G 5400 RPM, ATA-100 SEAGATE ST340015A	KH.04001.002
	HDD U9 80G 5400 RPM, ATA-100 SEAGATE ST380012A	KH.08001.002
	HDD ALPINE 80G 7200RPM, ATA-100 SEAGATE ST380011A	KH.08001.001
	HDD ALPINE 120G 7200RPM, ATA-100 SEAGATE ST3120022A	KH.12001.001
	HDD XL40S 40G 7200RPM, ATA-100 WD 400BB-00DEA0	KH.04008.002
	HDD XL80S 80G 7200RPM WD WD800BB-00DKA0	KH.08008.003
	HDD XL80 120G 7200RPM WD 1200BB-00DWA0	KH.12008.001
	HDD 40G 7200RPM, ATA-100 HITACHI HDS722540VLAT20	KH.04007.007
	HDD 80G 7200RPM, ATA-100 HITACHI HDS722580VLAT20	KH.08007.005
	HDD 120G 7200RPM, ATA-100 HITACHI HDS7225120VLAT20	KH.12007.003
CD-ROM/DVD-ROM/CD-RW		

Aspire T310

Picture	Partname	Part No.
	CD-ROM DRIVE 52X BTC F564E BLACK	KD.0520A.001
	CD-ROM DRIVE 52X MSI MS-8152 BLACK	KD.0520B.003
	CD-RW DRIVE 52X24X52X LITE-ON LTR-52246S BLACK	KR.05201.001
	DVD-ROM DRIVE 16X PIONEER DVD-121CHF BLACK	TBD
	DVD-ROM DRIVE 16X PIONEER DVD-121RD BLACK	KV.01605.003
	DVD-ROM DRIVE 16X LITI-ON XJ-HD166S BLACK	TBD
	DVD-ROM DRIVE 16X HLDS GCR-8162B BLACK	KV.0160D.001
	COMBO DRIVE 48X HLDS GCC-4480B BLACK	KO.0480A.001
	DVD DUAL DRIVE 4X NEC ND-1300A BLACK	TBD
	DVD DUAL DRIVE 4X PIONEER DVR-106RD BLACK	KU.00405.009
	SUPERMULTI PLUS 4X DVD HLDS GSA-4040B BLACK	KU.0040D.007
Cables		
	IDE HDD CABLE ATA66 40PIN	50.PSPVF.001
	IDE CD-ROM CABLE ATA66 40PIN	50.PSPVF.002
	IDE FDD CABLE 34PIN	50.PSPVF.003
	AUDIO CABLE 8PIN 2CON	50.S03VF.001
	FRONT INTERNAL USB CABLE	50.S03VF.002
Main board		
	MB E61ML P4/661FX/964L/2DIMM/3PCI	MB.S0307.001
Boards/Cards		

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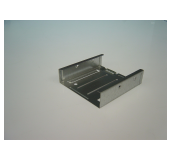
Picture	Partname	Part No.
	VGA CARD ATI RADEON 9200 (8X) 64MB DDR W/ TV OUT(NTSC), ATX BRACKET FIC	VG.A9207.001
	VGA CARD ATI RADEON 9200 (8X) 64MB DDR W/ TV OUT(PAL), ATX BRACKET FIC	VG.A9207.002
	VGA CARD ATI RADEON 9600 128MB DDR W/ TV OUT + DVI (PAL), ATX BRACKET FIC A96	VG.A9607.001
	VGA CARD ATI RADEON 9600 128MB DDR W/ TV + DVI OUT (NTSC), ATX BRACKET FIC A96	VG.A9607.002
	VGA CARD XABRE200 AGP 8X 32MB, ATX BRACKET	VG.20005.001
	MODEM CARD 56K F-1156I(+)/R12 ATX GVC-AAP	FX.56I02.003
	MODEM CARD 56K F-1156I(+)/R12 PACIFIC ATX GVC-USA	FX.56I02.001
	MODEM CARD 56K F-1156I(+)/R12 GVC-AUSTRALIA	FX.56102.005
	USB/ AUDIO DAUGHTER BOARD FOXCONN	55.PSPVF.001
Power Supply		
	POWER SUPPLY 230W W/O PFC FSP FSP200-ATV(A)	PY.23008.003
	POWER SUPPLY 230W W PFC FSP 200-ATV(A)(PF)	PY.23008.004
Case/Cover/Bracket Assembly		
	FRONT BEZEL W/ POWER BUTTON, 5.25" 3.5" EMPTY COVER, USB DOOR	60.S03VF.001
	POWER BUTTON	42.S03VF.001
	SIDE DOOR	60.S03VF.002
	CHASSIS W/ I/O BRACKET	60.S03VF.003
	I/O BRACKET	33.S03VF.001
	RETENTION MODULE	TBD
	LED MODULE	42.S03VF.002
	SWITCH HOLDER ASSY	42.S03VF.003
	EMPTY COVER FOR 5.25" DEVICE	42.S03VF.004
	HDD BRACKET	33.PSPVF.002
	FILLER COVER FOR 3.5" DEVICE	42.S03VF.005
Peripheral		

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Picture	Partname	Part No.
	MOUSE PS2 2 BUTTON+WHEEL KYE POWERSCROLL PS2 BLACK	MS.PSE04.006
	OPTICAL MOUSE USB 2 BUTTON+WHEEL KYE POWERSCROLL USB SILVER	MS.PSE04.005
	PS/2 Keyboard, KBP2971, US Ver., 104keys	KB.KBP03.066
	PS/2 Keyboard, KBP2971, T.Chinese Ver., 104keys	KB.KBP03.067
	PS/2 Keyboard, KBP2971, Thai Ver., 104keys	KB.KBP03.069
	PS/2 Keyboard, KBP2971, Arabic Ver., 104keys	KB.KBP03.068
	PS/2 Keyboard, KBP2971, Spanish/US Ver., 105keys	KB.KBP03.070
	PS/2 Keyboard, KBP2971, Int'l US Ver., 104keys	KB.KBP03.071
	PS/2 Keyboard, KBP2971, Canadian/French Ver., 105keys	KB.KBP03.072
	PS/2 Keyboard, KBP2971, Brazilian Ver., 107keys	KB.KBP03.073
	PS/2 Keyboard, KBP2971, UK Ver., 104keys	KB.KBP03.074
	PS/2 Keyboard, KBP2971, French Ver., 105keys	KB.KBP03.075
	PS/2 Keyboard, KBP2971, Germany Ver., 105keys	KB.KBP03.076
	PS/2 Keyboard, KBP2971, Italian Ver., 105keys	KB.KBP03.077
	PS/2 Keyboard, KBP2971, Swiss Ver., 105keys	KB.KBP03.078
	PS/2 Keyboard, KBP2971, Swedish Ver., 105keys	KB.KBP03.079
	PS/2 Keyboard, KBP2971, Belgium Ver., 105keys	KB.KBP03.080
	PS/2 Keyboard, KBP2971, Dutch Ver., 105keys	KB.KBP03.081
	PS/2 Keyboard, KBP2971, Holland Ver., 105keys	KB.KBP03.082
	PS/2 Keyboard, KBP2971, Spanish Ver., 105keys	KB.KBP03.083
	PS/2 Keyboard, KBP2971, Portugese Ver., 105keys	KB.KBP03.084
	PS/2 Keyboard, KBP2971, Iceland Ver., 105keys	KB.KBP03.085
	PS/2 Keyboard, KBP2971, Norwegian Ver., 105keys	KB.KBP03.086
	PS/2 Keyboard, KBP2971, Hebrew Ver., 105keys	KB.KBP03.087
	PS/2 Keyboard, KBP2971, Polish Ver., 105keys	KB.KBP03.088
	PS/2 Keyboard, KBP2971, Slovenian Ver., 105keys	KB.KBP03.089
	PS/2 Keyboard, KBP2971, Slovakian Ver., 105keys	KB.KBP03.090
	PS/2 Keyboard, KBP2971, Turkey Ver., 105keys	KB.KBP03.091
	PS/2 Keyboard, KBP2971, RussiamVer., 104keys	KB.KBP03.092
	PS/2 Keyboard, KBP2971, Hungaria Ver., 105keys	KB.KBP03.093
	PS/2 Keyboard, KBP2971, Greek Ver., 104keys	KB.KBP03.094

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Picture	Partname	Part No.
	USB Keyboard, KU0355, Canadian/French Ver., 105keys	KB.KUS03.010
	USB Keyboard, KU0355, US Ver., 104keys	KB.KUP03.034
	USB Keyboard, KU0355, T.Chinese Ver., 104keys	KB.KUP03.035
	USB Keyboard, KU0355, Arabic Ver., 104keys	KB.KUP03.037
	USB Keyboard, KU0355, Thai Ver., 104keys	KB.KUP03.038
	USB Keyboard, KU0355, Thai Ver., 104keys	KB.KUS03.008
	USB Keyboard, KU0355, Spanish/US Ver., 105keys	KB.KUP03.036
	USB Keyboard, KU0355, Int'l US Ver., 104keys	KB.KUS03.009
	USB Keyboard, KU0355, Brazilian Ver., 107keys	KB.KUS03.001
	USB Keyboard, KU0355, UK Ver., 104keys	KB.KUP03.041
	USB Keyboard, KU0355, French Ver., 105keys	KB.KUP03.039
	USB Keyboard, KU0355, Germany Ver., 105keys	KB.KUP03.040
	USB Keyboard, KU0355, Italian Ver., 105keys	KB.KUS03.011
	USB Keyboard, KU0355, Swiss Ver., 105keys	KB.KUP03.042
	USB Keyboard, KU0355, Sweden Ver., 105keys	KB.KUS03.012
	USB Keyboard, KU0355, Belgium Ver., 105keys	KB.KUS03.003
	USB Keyboard, KU0355, Dutch Ver., 105keys	KB.KUS03.013
	USB Keyboard, KU0355, Holland Ver., 105keys	KB.KUS03.002
	USB Keyboard, KU0355, Spanish Ver., 105keys	KB.KUS03.004
	USB Keyboard, KU0355, Portugese Ver., 105keys	KB.KUS03.004
	USB Keyboard, KU0355, Iceland Ver., 105keys	KB.KUS03.014
	USB Keyboard, KU0355, Norwegian Ver., 105keys	KB.KUS03.015
	USB Keyboard, KU0355, Hebrew Ver., 105keys	KB.KUS03.016
	USB Keyboard, KU0355, Polish Ver., 105keys	KB.KUS03.017
	USB Keyboard, KU0355, Slovenian Ver., 105keys	KB.KUS03.018
	USB Keyboard, KU0355, Slovakian Ver., 105keys	KB.KUS03.019
	USB Keyboard, KU0355, Turkey Ver., 105keys	KB.KUS03.020
	USB Keyboard, KU0355, RussiamVer., 104keys	KB.KUS03.021
	USB Keyboard, KU0355, Hungaria Ver., 105keys	KB.KUS03.022
	USB Keyboard, KU0355, Greek Ver., 104keys	KB.KUS03.023
Speaker		
	SPEAKER USB 3" *2 NEOSONICA THYME510 BLACK	SP.51004.003
Fansink		
	CPU FANSINK P4 478 2.8G (AND BELOW) FOXCONN PKP111G01D32 W/ LATCH CPU FANSINK P4 478 FOR 3.0GHZ CPU (AND ABOVE) FOXCONN PKP159GB1D22 + 92X92X25	HI.1110B.001 TBD
Foot Stand		
	RUBBER FOOT	47.S03VF.001
Screws		
	M/B, USB BOARD SCREW	86.PSPVF.001
	FDD, CD-ROM SCREW	86.PSPVF.002
	CHASSIS SCREW	86.S03VF.001
	SPS SCREW	86.PSPVF.004

Model Definition and Configuration

The AcerPower F1 / Aspire T310 Model No. Define:

1. Trade Mark:

2. Brand Name: Acer
3. Description: Intel Pentium4/Celeron Processor
4. Product Name: AcerPower F1 / Aspire T310

Test Compatible Components

AcerPower F1 / Aspire T310 compatibility is tested and verified by Acer's internal testing department. All of its system

functions are tested under the environments of Windows XP Home.

Microsoft Windows XP Home Environment Test

Components	Specifications	Model Description
Main Board		
Foxconn	P4/661FX/964L/2DIMM/3PCI	E61ML
	P4/661FX/964L/2DIMM/3PCI, with 1394	E61ML-2
CPU		
Intel	Celeron 2.4GHz/400FSB/128K	SL6VU, RK80532RC056128
	Celeron 2.5GHz/400FSB/128K	
	Celeron 2.6GHz/400FSB/128K (Multiple VID)	SL6V3, RK80532RC064128
	Celeron 2.8GHz/400FSB/128K	
	P4 2.5Ghz/400FSB/512K	
	Northwood 2.4Ghz/512k/533FSB	SL6PC, RK80532PE056512
	Northwood 2.8Ghz/512k/533FSB	SL6PF, RK80532PE072512
	Northwood 2.4G Socket 478	Northwood 2.4Ghz/512k/800FSB
	Northwood 2.6G Socket 478	Northwood 2.6Ghz/512k/800FSB
	Northwood 2.8G Socket 478	Northwood 2.8Ghz/512k/800FSB
	Northwood 3.0G Socket 478	Northwood 3.0Ghz/512k/800FSB
	Northwood 3.2G Socket 478	Northwood 3.2Ghz/512k/800FSB
DIMM (DDR 266/333/400)		
Infineon	DDR 266 256MB 0.14u 32MX8*8	HYS64D32000GU-7-B
	DDR 400 128MB	HYS64D16301GU-5-B
	DDR 400 256MB	HYS64D32300GU-5-B
Nanya	DDR 266 256MB 0.14u 32Mx8*8	NT256D64S88B0G-75B
	DDR 266 512MB 0.14u 32Mx8*16	NT512D64S8HB0G-75B
	DDR 333 128MB 0.14u 16M*16*4	NT128D64SH4B1G-6K
	DDR 333 256MB 0.14u 32M*8*8	NT256D64S88B1G-6K
	DDR 333 512MB 0.14u 32M*8*16	NT512D64S8HB1G-6K
	DDR 400 256MB	NT256D64S88B1G-5T EA
	DDR 400 512MB	NT512D64S8HB1G-5T
Micron	DDR 333 256MB	MT8VDDT3264AG-335CA CL2.5
HDD (5400RPM/7200RPM)		
WD	Protege 40G 5400RPM, ATA-100	WD400EB-42CPF0
	WD 80G 5400RPM, ATA-100	WD800EB-00DJF0
	XL40S 40G 7200RPM, ATA-100	400BB-00DEA0
	XL80S 80G 7200RPM	WD800BB-00DKA0
	XL80 120G 7200RPM	1200BB-00DWA0
Seagate	C2 40G 5400 RPM, ATA-100	ST340015A
	U9 80G 5400 RPM, ATA-100	ST380012A
	Alpine 80G 7200RPM, ATA-100	ST380011A
	Alpine 120G 7200RPM, ATA-100	ST3120022A

Components	Specifications	Model Description
Hitachi	40G 7200RPM, ATA-100	Vancover III HDS722540VLAT20
	80G 7200RPM, ATA-100	Vancover III HDS722580VLAT20 80G 7200RPM
	120G 7200RPM, ATA-100	Vancover III HDS722580VLAT20 120G 7200RPM
CD-ROM		
BTC	52X	F564E
CD-RW		
Liteon	52X/24X/52X	LTR-52246S
DVD		
Liteon	16X/40X	XJ-HD166S
Pioneer	16X/40X	DVD-121RD
	16X/40X	DVD-121CHF
HLDS	16X/40X	GDR-8162B
Combo		
HLDS	48X Combo	GCC-4480B
DVD Dual		
NEC	4X DVD DUAL	ND-1300A
Pioneer	4X DVD DUAL	DVR-106RD
SuperMultiPlus		
HLDS	4X DVD SuperMulti Plus	GSA-4040B
Modem Card		
GVC	F-1156I(+)/R12-AAP	
	F-1156I(+)/R12-USA	
	F-1156I(+)/R12-Australia	
Housing		
Foxconn	Microtower/3*3.5"+2*5.25"	TF165
SPS		
FSP	FSP200-ATV(A), 230W non-PFC SPS	
	FSP200-ATV(A)(PF), 230W PFC SPS	
FDD		
Panasonic	1.44M 3.5”	
7-in-1 card reader		
ECS	3.5" (black) 7-in-1 card reader	UCR-61
	3.5" (black) 7-in-1 card reader	UCR-61, w/1394
Daughter Board		
Foxconn	USB/Audio daughter board	
Mouse		
KYE	PS/2 mouse, 2 button+wheel	PowerScroll PS2
	USB optical mouse, 2 button+wheel	PowerScroll USB
Speaker		
Neosonica	USB, 3" *2	Thyme510
Monitor		

Components	Specifications	Model Description
Compal	17" CRT MONITOR,AC711,TCO99,N.M.,W/ EUROPE POWER CORD	
	17" CRT MONITOR,AC711,TCO99,N.M.,W/UK POWER CORD	
	17" CRT MONITOR,AC711,TCO99,N.M.,W/O POWER CORD	
	17" CRT MONITOR,AC711,TCO99,N.M.,W/US POWER CORD(STK)	
	17" CRT MONITOR,AC711,MPRII,N.M.,W/ US POWER CORD(AAC)	
	17" CRT MONITOR,AC711,MPRII,N.M.,W/ O POWER CORD	
	17" CRT MONITOR,AC711,MPRII,E.M.,W/ O POWER CORD	
	17" CRT MONITOR,AC711,MPRII,S.M.,W/ O POWER CORD	
	17" CRT MONITOR,AC711,MPRII,S.M.W/ AUSTRALIA POWER CORD	
	17" CRT MONITOR,AC711,MPRII,N.M.,W/ EUROPE POWER CORD	
	17" CRT MONITOR,AC711,MPRII,N.M.,W/ US POWER CORD(STK)	
	17" CRT MONITOR,AC711,MPRII,E.M.,W/ O POWER CORD(AAC)	
	17" CRT MONITOR,AC711,MPRII,N.M.,W/ CHINA POWER CORD	

Components	Specifications	Model Description
Compal	15" LCD MONITOR,AL511,W/O SPEAKER,TCO99,W/EUROPE POWER CORD	
	15" LCD MONITOR,AL511,W/O SPEAKER,TCO99,W/UK POWER CORD	
	15" LCD MONITOR,AL511,W/O SPEAKER,TCO99,W/O POWER CORD	
	15" LCD MONITOR,AL511,W/O SPEAKER,TCO99,W/AUSTRALIA POWER CORD	
	15" LCD MONITOR,AL511,W/O SPEAKER,TCO99,W/SWISS POWER CORD	
	15" LCD MONITOR,AL511,W/O SPEAKER,TCO99,W/CHINA POWER CORD	
	15" LCD MONITOR,AL511,W/O SPEAKER,TCO99,W/US POWER CORD(AAC)	
	15" LCD MONITOR,AL511,W/O SPEAKER,TCO99,W/US POWER CORD(STK)	
	15" LCD MONITOR,AL511(002),W/O SPEAKER,TCO99,W/US POWER CORD(STK)	
Jean	15" LCD MONITOR,AL513,W/O SPEAKER,TCO99,W/US POWER CORD(STK)	
	15' LCD MONITOR,AL512,W/ SPEAKER,TCO99,W/US POWER CORD(STK)	
Liteon	17" CRT,86K,AC707,MPRII,N.M.,W/US POWER CORD(STK)	
	17" LCD MONITOR, AL702,W/ SPEAKER, TCO99, W/US POWER CORE (STK)	
	15' LCD MONITOR,AL512,W/ SPEAKER,TCO99,W/US POWER CORD(STK)	
Liteon	17" CRT,86K,AC707,MPRII,N.M.,W/US POWER CORD(STK)	
	17" LCD MONITOR, AL702,W/ SPEAKER, TCO99, W/US POWER CORE (STK)	

Online Support Information

This section describes online technical support services available to help you repair your Acer Systems.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers you convenient and valuable support resources whenever you need them.

In the Technical Information section you can download information on all of Acer's Notebook, Desktop and Server models including:

- Service guides for all models
- User's manuals
- Training materials
- Bios updates
- Software utilities
- Spare parts lists
- TABs (Technical Announcement Bulletin)

For these purposes, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contained on this website are:

- Detailed information on Acer's International Traveler's Warranty (ITW)
- An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all your technical queries.

We are always looking for ways to optimize and improve our services, so if you have any suggestions or comments, please do not hesitate to communicate these to us.